Final Environmental Impact Report/ Response to Comments County of San Luis Obispo Los Osos Wastewater Project (LOWWP)

State Clearinghouse No. 2007121034

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Final EIR/Response to Comments on the Draft EIR for the County of San Luis Obispo Los Osos Wastewater Project

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SECTION 1: INTRODUCTION AND OVERVIEW OF THE RESPONSE TO COMMENTS DOCUMENT

1.1 - INTRODUCTION

The draft environmental impact report (Draft EIR) for the Los Osos Wastewater Project (LOWWP) was released for public and agency review and comment on November 19, 2008. The extended comment period closed on January 30, 2009 and numerous comment letters were received (14 agency letters and 60 letters from citizens, community groups, non-government organizations, and other interested parties.) This Response to Comments Document is a compendium of summary information responding to various comments made, further analysis of environmental issues related to the final Preferred Project, and additional technical reports performed on the Tonini parcel that is the site of two components of the Preferred Project.

The Draft EIR identified four proposed projects, or a combination of elements of the projects, to address the stated need to develop a wastewater collection, treatment and disposal system for the community of Los Osos. The Draft EIR identified an Environmentally Superior Alternative consisting of a gravity collection system, a facultative pond wastewater treatment system at the Tonini site and effluent disposal by sprayfield operation at Tonini and leachfield application at the Broderson site. Based on the findings of the Draft EIR and the ongoing technical analysis, including corrections to the Draft EIR Greenhouse Gas Analysis, the County selected the Environmentally Superior Alternative as the Preferred Project by combining project components for wastewater collection, conveyance, treatment process and site selection, wet weather effluent storage, and effluent and biosolids disposal. The Preferred Project is a hybrid of Proposed Project 4, which included a wastewater treatment plant and effluent disposal located at the Tonini site as well as a gravity wastewater collection system. The primary change that improves the environmentally superior characteristics is that an extended aeration treatment process (e.g., oxidation ditch or Biolac®) has replaced the facultative ponds from Proposed Project 4. As the LOWWP preliminary design has continued towards the Design/Build process, the County and its engineering consultants have refined the conceptual design for treatment plant and layouts of facilities at the Tonini site. The description of the Preferred Project is provided in Appendix A as well as additional environmental information that includes an evaluation of the potential environmental impacts that are different than those impacts addressed as part of Proposed Project 4.

The sites selected for the various Preferred Project components are the same as the Proposed Project 4 sites. The gravity sewer collection system area is unchanged, although there have been a few pump station and force main design refinements as described in the Preferred Project Description in Appendix Q. The raw sewage conveyance pipeline from the Mid-town Pump Station to the wastewater treatment plant and the treated effluent conveyance pipeline from the Tonini wastewater treatment plant site to the Broderson leachfield will be located within the shoulders of the south side of Los Osos Valley Road.

The Los Osos Wastewater Project (LOWWP) engineering team has developed several preliminary design refinements since the Draft EIR was completed. These refinements are within the scope of the Draft EIR project design parameters, and are discussed in Appendix Q to clarify the Preferred Project components and to facilitate environmental analysis of the Preferred Project. Because a Design/Build process will be used to complete the final design components of the system, subject to County approval, there may be some changes from what is described in this Final EIR. If any Design/Build changes differ significantly from the proposed projects covered by this EIR, supplemental environmental documentation may be required to evaluate some aspects of the final design, provide adequate public review of the proposed project's environmental impacts, and to support the permitting process.

Since the Draft EIR was prepared, the County's LOWWP team had conducted additional geotechnical, biological and cultural resource field studies at the Tonini site. These reports are incorporated as Appendix Q.7 (Geotechnical Report) and Appendix Q.9 (Cultural Resources Report). The Biological Assessment has been prepared by County staff assisted by the environmental consultant and sent directly to State Water Resources Control Board, and then to U.S. EPA (this starts the Section 7 consultation process referenced in the Draft EIR for "CEQA Plus" requirements).

This Response to Comments Document, in conjunction with the Draft EIR circulated in November 2008, constitute the Final EIR. The two documents should be reviewed together for a comprehensive understanding of the potential environmental impacts and recommended mitigation measures associated with the Los Osos Wastewater Project.

1.2 - RESPONSE TO COMMENTS ORGANIZATION

To assist in the review of this Response to Comments Document, following is a description of the organization of this document:

Section 1	Introduction and Overview of the Response to Comments Document
Section 2	List of Commentors
Section 3	Response to Comments
	Topical Responses
	Response to Individual Comments on the Draft EIR
Section 4	Minor Revisions and Clarifications to the Draft EIR Text
Appendix Q	Preferred Project Description and Environmental Evaluation
	Q-1 - Introduction
	Q-2 - Summary
	Q-3 - Preferred Project Description
	Q-4 - Environmental Setting
	Q-5 - Preferred Project Environmental Evaluation
	Q.6 - Spray Data for Tonini
	Q.7 - Technical Report: Geology
	Q.8 - Technical Report: Biology
	Q.9 - Technical Report: Cultural
	Q.10 - References

SECTION 2: LIST OF COMMENTORS

A list of public agencies, organizations, and individuals that provided comments on the Draft EIR is presented below. Each comment has been assigned a code. Individual comments within each communication have been numbered so comments can be crossed-referenced with responses. Section 3, Responses to Comments, includes the text of the communication followed by the corresponding response.

COMMENTOR **CODE**

Agency Comments

Public and Non-Governmental Comments

SECTION 3: RESPONSES TO COMMENTS

3.1 - INTRODUCTION

In accordance with Section 15088 of the California Environmental Quality Act (CEQA) Guidelines, the San Luis Obispo County Department of Public Works, as the lead agency, evaluated the comments received on the Draft EIR (State Clearinghouse No. 2007121034) for the Los Osos Wastewater Project and has prepared the following responses to the comments received. This Response to Comments document becomes part of the Final EIR for the project in accordance with Section 15132 of the CEQA Guidelines.

The comments on the Draft EIR address many different issues. Several issues drew a number of comments that raise the same or similar issues. The Topical Responses provided before the letters and their responses address those comments. Responses to individual comments may refer back to these topical responses by number and topic.

3.2 - COMMENT LETTERS AND RESPONSES

Topical responses are provided first followed by the individual reproduced comment letters, corresponding responses following the same organization as used in Section 2's List of Commentors.

TOPICAL RESPONSE 1: THE PROPOSITION 218 ELECTION

In 2007, the County conducted an election pursuant to "Proposition 218." Proposition 218 is the "Right-to-Vote on Taxes Act" and was added to the California Constitution as Article 13D. The procedures and substantive requirements for assessments established by Proposition 218 include:

- Determination of the proportional special benefits for overall project components.
- Identify the parcels receiving special benefit.
- Determine the proportionate special benefit to each property.
- Give property owners a 45-day (minimum) notice of proposed assessment and ballot.
- Receive property owner ballots.
- Conduct a public hearing.
- Determine if a "majority protest" exists (if majority of ballots returned are in opposition of assessment).

As required by Article 13D, an Assessment Engineer's Report was prepared to identify the special benefits that would be provided by the LOWWP. The Assessment Engineer's Report identified the total estimated cost associated with the special benefits of the project, and apportioned those costs to various properties as required by law. Ballots were distributed to property owners with the ballots weighted in proportion to the proposed assessment amount for each property. In December of 2007, the Clerk of the Board of Supervisors counted the ballots and reported the results. 75.3 percent of the

total valuation of the ballots was returned. The results were 20.33 percent no votes and 79.67 percent yes votes, which is commonly reported as 80/20.

Additional information regarding the 218 election can be found on the LOWWP web site at http://www.slocounty.ca.gov/PW/LOWWP.htm.

TOPICAL RESPONSE 2: PROJECT COSTS

The focus of the Draft EIR is to identify and disclose environmental effects, not project costs. Nevertheless, the Fine Screening Report (August 2007) provides detailed information regarding the overall costs of the alternatives. However, all costs are estimates and include an appropriate range, based on the level of information that is currently known about each alternative. Appendix C of the Fine Screening Report provides detailed information on how all cost estimates were developed.

Based on the information in the Fine Screening Report and Assessment Engineer's report, estimated project costs were developed. These costs are summarized in Table 3-1.

Table 3-1: LOWWP Overall Costs and Benefits

Cost Estimates for a Typical Single Family Residence	Monthly Cost Estimate ($)	Payments Due	Monthly Bill ($)	Semi-Annual Tax Bill ($)	Total Annual Cost Estimate ($)
Monthly Utility Bill for Operations and Maintenance	40	Monthly	40	N/A	480
Equivalent Monthly Assessments	150	Property Tax Bills	N/A	900	1,800
Equivalent Monthly Capital	10	Property Tax Bills	N/A	60	120
Subtotals	200		40	960	2,400
Equivalent Monthly On-Lot	50	Owner Financed Cost	N/A	N/A	600
Totals	**250**	**—**	**40**	**960**	**3,000**

Undeveloped properties were given an assessment of $0.00 in the 2007 Proposition 218 assessment proceedings. A second Proposition 218 assessment could address the costs of solving the current roadblocks to developing on vacant parcels in the prohibition zone (or re-developing under developed parcels). The assessment would have to address wastewater costs, water supply costs, and habitat costs. Alternatively, undeveloped properties would pay their share of project costs through hook-up fees. In the interim, if the project is built with the capacity to serve those properties, costs would be borne by existing residents, most probably as part of their monthly fees.

Capital, operating, maintenance, and replacement costs of the project were developed in the Fine Screening Report over its estimated useful life, which is often referred to as "life-cycle" costs. Generally, a 30-year period was used, which matches the expected life span of many major project components. (Although most major components of the systems may last longer than thirty years, their capital costs will have been fully paid in that time frame or shorter.) Where major components are not expected to last 30 years (such as liners in treatment and storage ponds), the component replacement costs over a 30-year period were included. This method also allows costs to include annual operations and maintenance, plus appropriate replacement costs for the various alternatives.

From a CEQA perspective, it is important that the EIR address the reasonably foreseeable impacts of the proposed project. Given that the majority of the prohibition zone is already subdivided, and that the area lies fully within the Urban Reserve Line, it is reasonable to expect that the area will build out within the lifespan of the LOWWP (50 to 100 years). Therefore, the Draft EIR evaluates the impacts resulting from constructing a project based on the buildout of the service area to the extent those impacts can be reasonably predicted.

TOPICAL RESPONSE 3: WATER RESOURCES AND THE PROJECT SCOPE

Several commentors focused on how the County is approaching water reclamation, beneficial reuse of treated effluent, and sustainability of the groundwater supplies. Several state that agricultural exchange must be a central component of the LOWWP. Several commentors also point to language in AB 2701 identifying that the County has some legislative ability to implement water resource efforts as part of the wastewater project. Several commentors assert that the Draft EIR is deficient in this respect.

These comments seek to expand the LOWWP beyond solving the wastewater issue and do not recognize the cooperative efforts between the water purveyors and the County under the Court approved Interlocutory Stipulated Judgment; which is guiding resolution of the existing groundwater litigation. Seawater intrusion is occurring and must be resolved. The LOWWP will reduce the existing rate of seawater intrusion. Nevertheless, expanding the wastewater project to incorporate other programs will repeat the LOWWP history of trying to do too much and then risking not funding and constructing the project as a result of further delays. RWQCB sanctions could also occur. Developing a wastewater project is the single most important issue to addressing the greater water resource problem, and solving the water resource issue requires completing a wastewater project.

The County's wastewater project approach is to develop a project that provides the County, the water purveyors and the community with the ability to solve the water resource issue. An approach that attempts to solve all problems with one project could delay LOWWP construction under the premise that all problems must be solved simultaneously or nothing should be done. Over the past two years, following the guidelines of the Court approved Interlocutory Stipulated Judgment; the County has met with the community, the purveyors, environmental, agricultural, and cultural groups, and each

regulatory agency to develop a solution that is the best possible outcome for the community considering the complexity of the challenges. Developing a wastewater project for Los Osos must be based on the practical realities of the challenges the community faces; the roles and responsibilities of the County, the purveyors, the public, the Courts, regulatory agencies and others; and with the clear understanding that solving all issues will not be accomplished with a single project—that multiple issues exist and that the County's multi-faceted approach and process is the most viable.

The LOWWP approach to seawater intrusion is established in the project objectives: "Address water resource issues by mitigating the Project's impacts to saltwater intrusion. Furthermore, the wastewater project will maintain the widest possible options for beneficial reuse of treated effluent." Draft EIR Section 5.2, Groundwater Resources, together with Appendix D; clearly describes the magnitude of the project's seawater intrusion impact together with the measures that will fully mitigate this impact. The Broderson leachfield site is anticipated to provide 99 acre feet/year of seawater intrusion mitigation; the conservation program would provide 88 acre feet/year of seawater intrusion mitigation. Given that the LOWWP would have a seawater intrusion impact of 90 acre feet/year, the project would provide approximately double the needed mitigation amount. (See Draft EIR Section 5.2, Groundwater Resources; Draft EIR Appendix D, Groundwater Quality Resources; and the Fine Screening Report's Sections 2.2 through 2.4.) Consequently, each mitigation effort (Broderson or conservation) provides back-up for the other. The LOWWP does not in any way prevent the community from achieving higher water use reductions through developing and implementing more sophisticated, or more restrictive, mandatory conservation measures. Building the LOWWP, which is essentially collecting and treating wastewater at a central point, will provide the community a number of options for further treatment and reuse. The community can then develop these effluent reuse options in concert with the water purveyors and possible agricultural participants.

TOPICAL RESPONSE 4: TERTIARY TREATMENT

The proposed LOWWP proposes secondary treatment meeting the waste discharge requirements of the Regional Water Quality Control Board. Site plans for the Tonini site provide for space to install optional future tertiary treatment facilities. ; The Tonini site itself is large enough to accommodate likely additional treated effluent storage needs for an agricultural and/or urban water reuse project by converting some of the space for sprayfields to storage ponds. If in the future it is determined that some or all of the treated effluent should be treated to a higher level for reuse, then the entity proposing that use (County and/or others) would comply with the Water Recycling Criteria as well as all other applicable statutes and regulations. The County intends to make treated effluent readily available to the purveyors for their use in any future recycled water project that benefits the community of Los Osos. As an example, the County team along with Technical Advisory Committee members and members of the public recently visited the Scott's Valley Wastewater Treatment Plant to observe the tertiary system installed at the treatment plant under an agreement with the water purveyor. That system was designed and constructed by the City, in cooperation with the water purveyor, and is operated by the treatment plant staff. This case is a good example of cooperation

between the wastewater agency and the water purveyor and can serve as a good model for similar relationships in Los Osos.

Tertiary treatment also raises the question of equitable costs. Reuse options would most probably benefit a larger population than just those who own property or live within the RWQCB Prohibition Zone. If a reuse option that requires tertiary treatment is developed, the costs of that project, including the tertiary component, should be borne by everyone who benefits from the project.

TOPICAL RESPONSE 5: ALTERNATIVE COLLECTION SYSTEMS

The analysis in the Draft EIR was conducted to "bracket" the potential impacts of the full range of feasible collection systems alternatives. The gravity collection system represents the greatest amount of disturbance in the public right of ways, while the STEP/STEG system represents the greatest amount of disturbance on private properties. The impacts of the majority of alternative systems would fall in between these two "brackets." It should be noted that during the project development process, the County produced a detailed technical memorandum on low-pressure systems (January 2008) which was fully reviewed by the Technical Advisory Committee. Many concerns were expressed that low-pressure systems appear to have limited capability to contain wastewater during power outages, with little to no opportunity to provide back-up systems to avoid spills. Other systems may have advantages in one area, with disadvantages in another. The approach taken in the Draft EIR accommodates a full range of alternative collection systems that could be proposed through the design/build process. Examples of potential alternatives include hybrid systems that incorporate areas of low-pressure or vacuum pipelines as well as complete alternative systems.

TOPICAL RESPONSE 6: ALTERNATIVE TREATMENT SYSTEMS

Alternative wastewater treatment systems were evaluated in the Rough and Fine Screening reports (March 2007 and August 2007). Those reports compared performance, cost, and other parameters to the requirements established for the LOWWP. The initial list of treatment alternatives was narrowed to three categories with one or more systems within each category, as follows:

- Suspended Growth Activated Sludge
  - MBR - Membrane Bio-Reactor
  - Biolac™
  - SBR - Sequencing Batch Reactor
  - Oxidation Ditch
- Attached Growth Fixed Media
  - Trickling Filters
  - Rotating Biological Contactors (RBCs)
  - Packed Bed Filters
- Advanced Treatment Ponds
  - Advanced Integrated Wastewater Pond System (AIWPS®)

- Facultative Ponds and Constructed Wetlands
- Partially Mixed Facultative Ponds

Based on the particular Los Osos area requirements, and comparing the various technologies to each other, the list was further narrowed to three treatment alternatives for evaluation in the Draft EIR as discussed Draft EIR Section 7, Alternatives to the Proposed Project. These alternatives, which are all viable systems, also encompass a full range of potential impacts relative to land requirements, energy use, and performance. The three technologies are:

- Biolac™
- Oxidation Ditch
- Facultative Ponds

The project selection process through the Design/Build Request for Qualifications is specifically designed to invite alternative technology proposals. Should an alternative technology come forward that meets all current criteria as well as the three technologies do, and reduces costs or environmental impacts, that technology will be considered as well.

TOPICAL RESPONSE 7: ALTERNATIVE DISPOSAL OPTIONS

The effluent disposal alternatives in the Draft EIR all utilize the same set of disposal options: a sprayfield at the Tonini site and subsurface disposal at Broderson. These options were selected because they best meet the LOWWP's objectives. These options:

- Comply with RWQCB Waste Discharge Requirements.
- Contribute to alleviating groundwater contamination by placing treated water at Broderson.
- Address water resource issues by mitigating the project's impacts on water supply and saltwater intrusion by placing treated water at Broderson. And, by including space at the treatment plant for further treatment and building a return line back to Broderson, maintain the widest possible options for beneficial reuse of treated effluent.
- Incorporate measures to minimize potential environmental impacts.
- Minimize lifecycle costs and the related affordability impacts to residents.
- Comply with applicable local, state, and federal permits.

Other disposal options include potential leachfield sites within the community, as evidenced by the project the LOCSD proposed in 2001. However, these urban leachfields require the use of multiple street rights of ways to install leach lines, leading to on-going high maintenance costs and concerns about the long-term effects of leachfields in the urban area. Together with Broderson, these sites, could not accommodate the entire expected flows, leaving a substantial volume (over one-third) of the effluent needing disposal. A key project requirement is redundancy, including providing for an alternate disposal area outside of the urban area in the unlikely event that for any reason in-town

disposal is not usable in either the long or short term. Alternate in-town disposal sites would not meet this redundancy goal, in addition to being unable to accommodate all of the flows.

TOPICAL RESPONSE 8: THE BRODERSON LEACHFIELD

Opportunities for realizing beneficial basin results lie in the unique geology and soils in Los Osos, and especially at the Broderson site. These conditions were identified during development of the initial wastewater project proposal for Los Osos in 1985. Ancient dune sands overlie the Paso Robles formation and create an effective water cleansing and storage condition. Water discharged to the perched and shallow aquifers in the central and northern portion of Los Osos is quickly lost to the Bay and to inaccessible portions of the subsurface aquifer; however, water discharged to the southern edge of the sand formations, like those at Broderson, that have more favorable conditions to the upper and lower groundwater aquifers and greater distance to the Bay, has an opportunity to spread both downward and laterally through the subsurface formation, allowing for both filtration and unsaturated soil zone treatment (aerobic). A partial key to this effect is the presence of lamellae, which are thin clay layers (finer than a pencil) with a coating of iron oxides both above and below each layer. As water contacts these discontinuous layers, it tends to move laterally until reaching the edge of the lamella, then stair steps downward before reaching the next layer. This effect both slows and spreads the water, allowing more soil contact time with its accompanying filtering and cleansing effects, preventing over-rapid inflow of treated effluent into the deeper water bearing layers below.

An important aspect of disposing of treated water at Broderson is the timing and amount of effluent that will disposed of at the site. "Application rate" describes the amount of water applied as a ratio to the surface area of soils in contact with a leachfield trench. "Hydraulic loading" describes the amount of water applied as a ratio to the overall area of the site. Although various scientific studies addressed the issue, work performed by Fugro Engineers in support of the County's 1989 project involved the construction of subsurface infiltration drywells, essentially a large cylinder shaped excavation filled with gravels. Water was introduced at varying rates and subsurface monitoring devices were used to track the movement of the water. Because there was (and is) no readily available source of treated wastewater effluent, potable water was used for these tests. The maximum soil infiltration rate was measured at 180 gallons of water per day per square foot of area. However, the rate is adjusted downward because the tests used water with a lower solids component than treated wastewater. The current project, in order avoid impacts not at Broderson but in areas closer to the Bay (see below) will use a maximum hydraulic loading of 3.1 gallons of water per day per square foot of area. This application rate is less than 2 percent of the observed infiltration rate and 12 percent of the maximum design application rate, which allows for operational considerations such as soil column drying and system maintenance.

The potential for treated wastewater to flow into the yards of residences on Highland Drive was investigated in two studies prepared by Cleath and Associates and incorporated by reference into the Draft EIR. The second study, Hydrogeologic Investigation of the Broderson Site Phase 2 Impact

Assessment, dated November 2000, presents hydrogeologic modeling data compiled to determine the best way to introduce treated wastewater to the site in a manner that: 1) helps cleanse the upper aquifer and 2) avoids surfacing treated effluent down slope. Based on the analysis of subsurface geology and the amount of wastewater disposed at the site, the study computes horizontal subsurface travel times for treated effluent. The study concludes that a disposal leachfield located upslope of the Broderson site covering an area in excess of 7 acres (the LOWWP has an 8-acre leachfield) and with a maximum disposal rate of 800,000 gallons per day will not result in the surfacing of treated effluent along Highland Drive or in the Redfield Woods neighborhood in general. Over time, however, treated effluent will migrate down slope toward the Bay where groundwater levels are shallower in comparison to areas to the south. To provide further assurance that treated effluent will not surface in this area, the amount of wastewater proposed to be introduced at the Broderson Site is reduced to 400,000 gallons per day.

Key background documents addressing the Broderson site include:

- Hydrogeological Evaluation of the Proposed Broderson Recharge Site, February 26, Metcalf & Eddy
- Final Los Osos Wastewater Project Technical Memoranda for Alternative Site Evaluation, Alternative Treatment Process Evaluation, Alternative Collection System Evaluation, Alternative Pump Station Evaluation, Infiltration Basin Evaluation, (revised) August 30, 1996, Metcalf & Eddy
- Evaluation of Effluent Disposal at the Proposed Broderson Recharge Site, November 21, 1997, Metcalf & Eddy
- Hydrogeological Investigation of the Broderson Site, July 2009, Cleath & Associates
- Hydrogeological Investigation of the Broderson Site, Phase 2, November 2000, Cleath & Associates

TOPICAL RESPONSE 9: WATER CONSERVATION MEASURES

The proposed LOWWP includes water conservation measures that are expected to reduce flows to the wastewater treatment plant by at least 160 acre feet per year below expected wastewater generation rates absent the water conservation measures. The resulting conservation will be realized as a reduction of pumping from the over drafted lower aquifer system. While historical production from the lower aquifer system has become a form of human made recharge to the upper aquifer system through septic system recharge, the reduction in lower aquifer system production effectuated by conservation will result in less seawater intrusion.

The conservation measures and their relative effectiveness were derived from the Los Osos Community Services District Urban Water Management Plan, (December 2000), where several

alternatives for water conservation were identified. Three options were selected as being the most cost effective:

1. Community Fixture Replacement - mandating that bathrooms be retrofitted with all low-flow fixtures prior to hookup to the new sewer;
2. Public Education; and
3. High-Efficiency Appliance Promotion Programs.

The Urban Water Management Plan predicted that these three programs would reduce indoor water consumption by 14.5 percent in nine years. To achieve the desired minimum 160 AFY reduction in effluent, the LOWWP will implement these three water conservation measures as described in Section 3.3.2 of the Draft EIR. The most effective is expected to be replacing domestic and commercial bathroom fixtures, including toilets and shower heads, with low flow fixtures. Costs for a toilet replacement program were included in project cost estimates in the Fine Screening Report. The reduction in overall water use in the prohibition zone equates to 160 acre feet less water pumped from the lower aquifer on an annual basis. If the 160 AFY water conservation goal is not met, then the LOWWP would work with the water purveyors to implement additional water conservation measures.

The LOWWP does not prevent the community from achieving higher water use reductions through the development and implementation of more sophisticated, or more restrictive, mandatory conservation measures.

TOPICAL RESPONSE 10: INFILTRATION, INFLOW, AND EXFILTRATION

Infiltration/Inflow (I/I) and exfiltration rates of the various pipe joint alternatives are fully discussed in the Flows and Loads Technical Memorandum (July 2008). According to that document, properly installed bell-and-spigot sewers will be watertight at first, and then may slowly lose some of their integrity as the surrounding soils shift, compressing the pipes, and compromising their seals at the joints. Some studies show that PVC pipe with bell and spigot joint can perform as new, even after decades of use, indicating that infiltration rates may be near zero (Bauer, 1990; Alferink, 1995; Whittle, 2005). However, a treatment plant should be designed to accommodate a reasonably conservative level of I/I. In order to ensure that levels of I/I do not rise to the point that they may exceed the treatment capacity, or cause unwanted impacts a maintenance and rehabilitation program will be instituted.

Communities with excessive I/I often are those with sewer systems dating from an era before modern sewer construction techniques and materials and often included the use of combined sanitary and storm sewers. The key to maintaining the watertight status of bell and spigot type pipe joints is the implementation of an ongoing Sewer System Management Plan, which is now a component of California regulations (see the Preferred Project Evaluation in Appendix Q.1, Introduction, and

Topical Response 12, Sewer System Management Plan). Never the less, using conservative figures for treatment plant design, the Flows and Loads TM estimates 300,000 gallons per day be used as an infiltration/inflow figure for the gravity sewer. Fusion welded pipe joints are expected to maintain water tightness indefinitely, assuming an adequate monitoring program is in place to detect and repair failures. Some degree of infiltration is expected to develop over time at the STEP tanks, although a monitoring and maintenance program would address the issue. Exfiltration in either system would be low as the majority of the gravity system is not pressurized and the STEP system (and pressurized portions of the gravity system) use pipe systems designed for that application.

Draft EIR Appendix B, Project Description Data, Section 3.32, contains a discussion of exfiltration issues related to both gravity and STEP systems. Draft EIR Section 5.7, Public Health and Safety, and Appendix I, Public Health and Safety, analyze the environmental effects of exfiltration and conclude that the volume expected from a modern system would not have a significant environmental effect.

TOPICAL RESPONSE 11: CONSTRUCTION AND POST-CONSTRUCTION STORMWATER

Any project involving earth moving has the potential to expose soils to rainwater, and to alter natural drainage patterns in a way that results in soil erosion and subsequent sedimentation. The Draft EIR Appendix E-1, Expanded Drainage and Surface Water Quality Analysis, evaluates stormwater impacts and proposes mitigation measures. In recognition of the potential negative environmental consequences of soil erosion caused by construction projects, the EPA has developed requirements for the preparation and implementation of Storm Water Pollution Prevention Plans (SWPPPs).

The County of San Luis Obispo is required to comply with Federal and State Regulations including the Clean Water Act National Pollutant Discharge Elimination System (NPDES) Program and State Water Resources Control Board (SWRCB) General Permit for stormwater discharge. Current California construction stormwater regulations, as expressed in the Statewide General Construction Stormwater Permit (see http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml) require that all construction stormwater and dewatering flows be handled in a manner that prevents contaminated water from impacting adjacent waters, including groundwater. The design/build contractor will, as a matter of law, be required to prepare and implement the state mandated Stormwater Pollution Prevention Plans (SWPPPs) tailored to the specific methods and timing of construction.

The SWRCB General Permit requires all dischargers, including the County, where construction activities disturb one acre or more to:

1. Develop and implement a SWPPP that specifies Best Management Practices (BMPs),
2. Implement BMPs which will prevent all construction pollutants from contacting storm water with the intent of keeping all products of erosion from moving offsite into receiving waters;

3. Eliminate or reduce non-storm water discharges to storm sewer systems and other waters of the nation, and;
4. Perform inspections to verify that all BMPs have been implemented.

The County's standard construction specifications require contractors to retain a copy of the SWPPP and all other permit requirements at the construction site. In addition, contractors are required to promptly notify the County if suspected hazardous materials are encountered during construction, and require that any such materials be disposed of in accordance with the applicable state and federal codes.

Water generated by de-watering activities will be required to comply with the terms and conditions of a permit issued by the Regional Water Quality Control Board (RWQCB). As explained in Draft EIR Section 3, Project Description, Section 3.3.4 Construction Activities, Baker tanks will be moved from one temporary location to another to contain the water pumped during dewatering operations. If construction water requires treatment, that treatment would be tailored to the specific contaminants targeted for removal. If required, portable treatment systems, designed for construction purposes, could be employed on a temporary basis as the project proceeds. Finally, the costs and efforts associated with dewatering and treatment would be compared with the cost and efforts with construction, such as directional drilling, through a value engineering process.

Stormwater flows during LOWWP operations have been estimated for the preliminary design based on a 25 to 100-year design storm as required by the County's Public Improvement Standards. Drainage channels, retention and detention basins have been included in the preliminary design that comply with Low Intensity Development (LID) standards for the various LOWWP facilities and sites as described in Appendix Q.3, Preferred Project Description.

TOPICAL RESPONSE 12: SEWER SYSTEM MANAGEMENT PLAN

The key to maintaining the water tight status of bell and spigot type pipe joints, as described in Topical Response 10, Infiltration, Inflow, and Exfiltration, is implementing an ongoing Sewer System Management Plan (SSMP), which is now a component of California regulations. See http://www.waterboards.ca.gov/water_issues/programs/sso/index.shtml#plan and Appendix Q.3 Preferred Project Description, Section Q.3.3, Project Characteristics.

The LOWWP will develop and implement a SSMP with the overall objective of facilitating proper funding and management of the sewer systems. The SSMP will include provisions to provide proper and efficient management, operation, and maintenance of the sewer system, while taking into consideration risk management and cost benefit analysis. Additionally, the Plan will contain a spill response plan that establishes standard procedures for immediate response to a spill in a manner designed to minimize water quality impacts and potential nuisance conditions.

The SSMP will address the elements described below.

Goal	The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent overflows, as well as mitigate any spills that do occur.
Organization	The SSMP must identify: 1. The name of the responsible or authorized representative 2. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and 3. The chain of communication for reporting spills, from receipt of a complaint or other information, including the person responsible for reporting spills to the State and Regional Water Board and other agencies if applicable (such as Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services [OES]).
Legal Authority	The County must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to: 1. Prevent illicit discharges into its sanitary sewer system; 2. Require that sewers and connections be properly designed and constructed; 3. Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the County; 4. Limit the discharge of fats, oils, and grease (FOG) and other debris that may cause blockages; and 5. Enforce any violation of its sewer ordinances.
Operation and Maintenance Program	The SSMP must include those elements listed below that are appropriate and applicable to the system: 1. Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities; 2. Describe routine prevention operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Prevention Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders; 3. Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects.

	Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan; 4. Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and 5. Provide equipment and replacement part inventories, including identification of critical replacement parts.
Design and Performance Provisions	1. Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and 2. Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and 3. Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.
Overflow Emergency Response Plan	The County will develop and implement and overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following: 1. Proper notification procedures so that the primary responders and regulatory agencies are informed of all overflows in a timely manner; 2. A program to ensure an appropriate response to all overflows; 3. Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities 4. Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained; 5. Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and 6. A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the overflow, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.
FOG Control Program	1. Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, Best Management Practices (BMP) requirements, record keeping and reporting requirements; 2. Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;

	3. An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and 4. Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified above.
System Evaluation and Capacity Assurance Plan:	The County will prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include: 1. Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an overflow discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows including flows from overflows associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events; 2. Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation above to establish appropriate design criteria; and 3. Capacity Enhancement Measures: The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increase in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.
Schedule	The County will develop a schedule of completion dates for all portions of the CIP developed above.
Monitoring, Measurement, and Program Modifications	The County will: 1. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities; 2. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP; 3. Assess the success of the preventative maintenance program; 4. Update program elements, as appropriate, based on monitoring or performance evaluations; and 5. Identify and illustrate Sewer System Overflows (SSO) trends, including: frequency, location, and volume.
SSMP Program Audits	As part of the SSMP, the County will conduct periodic internal audits, appropriate to the size of the system and the number of spills. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the compliance with the SSMP, including identification of any deficiencies in the SSMP and steps to correct them.

Communication Program	The County will communicate on a regular basis with the public on the development, implementation, and performance of the SSMP. The communication system shall provide the public the opportunity to provide input as the program is developed and implemented. The County will also create a plan of communication with systems that are tributary and/or satellite to the sanitary sewer system (roads, drainage, etc.).

TOPICAL RESPONSE 13: CONSTRUCTION EXCAVATION

Section 3, Project Description, and Appendix B, which is a more detailed preliminary project description, in the Draft EIR provide information regarding the amount and characteristics of the excavation that would be needed, as well as provide information about the assumptions that were used to calculate the volumes of material. Updated project excavation estimates are provided in Appendix Q, Preferred Project Evaluation.

Some commentors have suggested that the estimated excavation quantities for different alternatives are too high, or too low. One common question concerns the amount of excavation required for STEP systems, and is based on the assumption that the collection lines in the streets can be directionally drilled, which would require no excavation. This is not correct. The Draft EIR assumes that only 50 percent of the STEP collection lines would be directionally drilled. In many areas, open cut trenching could be more economical than directional drilling, or directional drilling technologies would be difficult to implement due to surface space constraints. Where other constraints, such as environmental resources, permit, contractors would be expected to choose the most efficient and cost effective methodology. Also, directional drilling requires the excavation of bore pits at the start and conclusion of a directional bore; where pipelines connect to other lines, such as the laterals to each residence or commercial building, smaller excavations are required to make those connections. Finally, many have commented that laterals to individual residences can be bored, rather than trenched. It must be understood that a directional drill sometimes requires substantial space both directly behind the drill rig and directly beyond the bore receiving pit. While small adjustments can be made in the field, many lateral locations do not provide the necessary additional space.

Other questions concern the stability of the soils in the community and their ability to support trench walls. Experience on various projects in Los Osos, including construction of sewer lines as part of the LOCSD project in 2005, show that the soils in Los Osos will support the trenching required to install a sewer system. As stated in Section 3.3.4 on Construction Activities in the Draft EIR, California construction safety standards also require that any trench deeper than four feet, into which any worker enters, must be supported by a trench shoring system (or the trench walls must be sloped to prevent collapse). With the advent of stricter trench safety standards over a decade ago, various highly efficient shoring systems have been developed by construction contractors. Because the construction industry is highly competitive, contractors have learned to maximize their production rates while still remaining in full compliance with shoring requirements.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

In reply refer to:
2008/08508:MRM

JAN 15 2009

Paavo Ogren
San Luis Obispo County
Department of Public Works
County Government Center, Room 207
1050 Monterey St.
San Luis Obispo, California 93408

Dear Mr. Ogren:

NOAA's National Marine Fisheries Service (NMFS) reviewed the draft Environmental Impact Report (EIR) for the Los Osos Wastewater Project (Project) near Los Osos, California. As requested in the draft EIR, NMFS provides the following information to assist San Luis Obispo County (County) in formulating the final EIR. There is a continuing need for County to collaborate with NMFS beyond the comment period because as revealed below the Project is expected to have implications for threatened steelhead (*Oncorhynchus mykiss*) and require Section 7 consultation with NMFS. Accordingly, the information contained herein should be used to develop the final EIR and minimize adverse effects on steelhead.

The Project is of concern because threatened steelhead and critical habitat for this species are present in the action area. The final EIR should therefore clearly identify and describe the Project including interrelated and interdependent actions to the extent that NMFS may develop an understanding of the potential effects (offsite, onsite, direct, indirect, temporary, permanent) of the Project on steelhead and critical habitat. The draft EIR has included some of this information though there is some additional information NMFS will need to fully analyze effects of this Project on steelhead in the context of the Section 7 consultation. NMFS recommends that the following information be included in final EIR:

- Conduct and provide results from a survey to assess presence of steelhead in the Project area. Another survey should be conducted no later that 2 weeks prior to implementing Project activities to gain more recent information of steelhead presence at these locations just prior to undertaking the Project. A1-1
- Provide greater detail on how culvert removal and bridge installation will be conducted (i.e. design drawings, dewatering plan, time line for implementation, etc.) and the impacts expected (i.e. loss of service to the species, handling and moving steelhead, etc) from these activities. NMFS will need specifics on disturbance area including access points and extent construction vehicles will be used in the creek in order to determine the level of Project impacts to steelhead and critical habitat during section 7 consultation. A1-2

- Clarify whether collection pipelines will be trenched or suspended at stream crossings. The level of disturbance and threat to steelhead and critical habitat is significantly different between the two. NMFS would prefer bridge suspension as it reduces the level of disturbance to the stream during installation and eliminates the possibility of the pipeline becoming exposed due to scour and potentially creating a barrier to steelhead or need for further instream disturbance or maintenance. A1-3

- Include risk analysis of spills to steelhead and critical habitat over long term operation of plant and collection lines (identify level of risk, likelihood of spill, spill contingency plan, etc.). Spills could result from such events as damaged pipes, big rain events that flood facilities, cause extensive uncontained runoff, or possible inundation of plant facilities with more water than it can process. A1-4

- Include a discussion as to how the installation of this facility may influence water use or anthropogenic growth and development of the area surrounding and resulting impacts to steelhead and critical habitat. A1-5

- Clarify in the effects to steelhead discussion whether there is any way that the Project will affect the amount and extent of surface flow in steelhead bearing streams. If so, these impacts need to be included in the analysis. A1-6

- NMFS understanding of the project is that it is intended that there will be no direct discharge of wastewater or treated effluent to steelhead bearing streams or water bodies that connect with steelhead bearing streams. Please confirm this understanding in the discussion with effects to the species. If there is a possibility of or project component that results in the discharge of wastewater or treated effluent to steelhead bearing streams, a detailed description of the action and its effects should be developed including the water quality characteristics of the discharged water. A1-7

- Discuss and identify potential risk or impacts due to runoff from the facility site, leach fields, or spray fields into steelhead bearing waters and critical habitat. How is runoff from these sites contained or treated? A1-8

- The EIR should disclose that consultation with NMFS is necessary prior to undertaking the Project, in accordance with Section 7 of the Endangered Species Act. To this degree NMFS should also be included on the list of federal agencies being consulted with. A1-9

NMFS appreciates the opportunity to provide information that would assist the County in the development of the final EIR for the subject Project. Matt McGoogan is NMFS' representative for this specific Project. Please call him at (562) 980-4026 if you have any questions concerning this letter or if you require additional information.

Sincerely,

for Rodney R. McInnis
Regional Administrator

Agency Comments

Commentor United States Department of Commerce National Oceanic and Atmospheric Administration, Rodney R. McInnis, January 15, 2009 (Letter A1)

Response to Comment A1-1

This comment suggests that baseline surveys and a pre-construction survey be conducted to assess the presence of steelhead within the project area. Los Osos Creek represents the only known steelhead bearing stream within the study area due to its direct connectivity with Morro Bay, lack of fish barriers, and suitable habitat elements. The preferred project no longer proposes any in-stream work within Los Osos Creek or Warden Creek, as discussed in the supplemental evaluation for the preferred project contained within Appendix Q. The crossing of Los Osos Creek and Warden Creek for conveyance pipelines will be conducted by bridge suspension, and installation of pipelines will be conducted from the road right-of-way on top of the Los Osos Creek and Warden Creek bridges. Los Osos Creek will be dry at the time of construction. The crossing will be made by securing the pipelines to the existing bridge structure. The raw wastewater pipeline will be secured to the north edge of the existing bridge using conventional pipe hangers. The treated wastewater pipeline will cross the creek on its south side through existing voids within the bridge abutments. It is anticipated that all construction activities, including access and staging, will be restricted to existing developed areas on the Los Osos Creek and Warden Creek bridge crossings and rights-of-way. It will be necessary to support the pipeline during installation. This could be accomplished from above with an excavator or similar equipment, from below with a small backhoe/loader, or with hand-built falsework. If equipment is used in the creek bed, it would be lowered into place and retrieved with a crane without the use of construction equipment within the stream. No construction access ramp would be required. It is anticipated that trimming of trees will be required during installation. No trees will be removed and the functions and values of the supporting riparian habitat will remain unaffected.

Therefore, with the implementation of reasonable and prudent measures developed through the consultation process, the project is not likely to adversely affect steelhead or critical habitat, and surveys or sampling would not be required to further analyze potential project effects.

Mitigation Measure 5.5-A6 is modified to include all measures necessary to minimize potential impacts to steelhead and critical habitat:

5.5-A6 ~~Additional specific avoidance measures, preconstruction survey requirements, and mitigation measures, if required, shall be provided by the NMFS consultation with regard to southern steelhead. Any impacts within Los Osos Creek shall be minimized to the maximum extent feasible. If the project proposes to use open-cut trenching or bridge suspension methods for installation of the conveyance pipeline system, the project shall perform all construction associated with the crossing of Los Osos Creek during the dry~~

~~months when the creek bed is entirely dry and there is no sign of standing water.~~

~~Project activities shall be required to occur during times when there is the least potential for southern steelhead to occur in Los Osos Creek (July – September).~~

~~If project construction is to occur within any portions of Los Osos Creek or any adjacent upland areas within 100 feet of the Creek, the project shall implement erosion, sediment, material stockpile, and dust control Best Management Practices (BMPs) at all times during construction to minimize the potential for fill or runoff to enter Los Osos Creek. Construction vehicles shall be restricted within Los Osos Creek to the maximum extent feasible required for either open-cut trenching or bridge suspension methods. All construction equipment shall be maintained to prevent leaks of fuel, lubricants, or other fluids into Los Osos Creek.~~

~~Service and re-fueling procedures shall be restricted to disturbed or developed upland areas at least 50 feet from Los Osos Creek to prevent potential spills of hazardous materials. The project shall confine all heavy equipment, vehicles, and construction work to approved roads and work areas around Los Osos Creek. Stream channel work for open-cut trenching or activities associated with pipe suspension shall limit disturbance to Los Osos Creek to what is necessary for construction. If the project proposes to use HDD methods, the project shall implement a frac-out contingency plan to manage the inadvertent release of any drilling muds into Los Osos Creek.~~

~~All project work areas within and around Los Osos Creek shall be restored to pre-existing contours upon completion of work. Any impacts to riparian and wetland habitat shall be mitigated for through replacement mitigation at a set ratio as determined through consultation with the regulatory and wildlife agencies. Where the mitigation requirements of separate policy under the CZLUO, or the requirements of the USACE, RWQCB, and CDFG or other agency with jurisdiction over an area are different, the more restrictive regulations shall apply.~~

<u>All construction activities across Los Osos Creek shall be restricted to low-flow periods of June15 through November 1. If the channel is dry, construction can occur as early as June 1. Restricting construction activities to this work window will minimize impacts to migrating adult and smolt steelhead, if present.</u>

Prior to construction, the County shall retain a qualified biological monitor to be on site during all stream crossing activities associate with Los Osos Creek. The biological monitor will be authorized to halt construction if impacts to steelhead are evident.

Prior to construction, a spill prevention plan for potentially hazardous materials shall be prepared and implemented. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching the creek channel.

Prior to construction, silt fencing shall be installed in all areas where construction occurs within 100 feet of known or potential steelhead habitat. All silt fencing, erosion control and landscaping specifications shall only include natural-fiber, biodegradable products for meshes and coir rolls to minimize impacts to species and the environment during use.

During construction, spoil sites shall be restricted to upland locations so they do not drain directly into Los Osos Creek. If a spoil site drains into a water body, catch basins shall be constructed to intercept sediment before it reaches the channels. If required, spoil sites shall be graded to reduce the potential for erosion.

During construction, equipment and materials shall be stored at least 50 feet from Los Osos Creek. No debris such as trash and spoils shall be deposited within 100 feet of waterways. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be restricted to locations outside of the stream channel and banks. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream shall be positioned over drip pans at all times. Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Vehicles shall be moved away from the stream prior to refueling and lubrication.

During construction, proper and timely maintenance for all vehicles and equipment used shall be provided to reduce the potential for mechanical breakdowns leading to a spill of materials into or around the creek. Maintenance and fueling shall be restricted to safe areas away from Los Osos Creek that meet the criteria set forth in the spill prevention plan.

Immediately following construction, all construction work areas shall be restored to pre-construction channel conditions, including streambed composition, compaction, and gradient. If required, channel banks shall be returned to original grade slope and appropriate bank stabilization techniques shall be implemented to reduce the potential for erosion and sedimentation. A plan describing pre-project conditions and restoration methods shall be prepared prior to construction.

Immediately following construction, all appropriate construction work areas will be revegetated with an appropriate assemblage of native upland vegetation, and if necessary, riparian vegetation, suitable for the area. A plan describing pre-project conditions, restoration and monitoring success criteria shall be prepared prior to construction.

Response to Comment A1-2

This comment requests that greater detail be provided on how culvert removal and bridge installation will be conducted and the impacts expected from these activities. Los Osos Creek represents the only known steelhead bearing stream within the study area due to its direct connectivity with Morro Bay, lack of fish barriers, and suitable habitat elements. The commentor is directed to the preferred project description contained within Appendix Q for a detailed description of the creek crossing method at Los Osos Creek. Specific engineering designs for the bridge suspension elements have been prepared for the project's Coastal Development Permit application. No loss to steelhead is anticipated and no handling or moving of steelhead will be required. Critical habitat within Los Osos Creek shall be avoided. The trimming of a few mature willow trees represent a temporary impact that will not result in the loss of function and value of the riparian habitat.

Response to Comment A1-3

This comment is requesting clarification on the installation method for the collection pipelines. The collection pipelines at Los Osos Creek and Warden Creek will be installed by bridge suspension and no in-stream work will be required during construction. See Response to Comment A1-1.

Response to Comment A1-4

This comment requests that a risk analysis of spills be conducted that addresses the long-term operation of the treatment facility and the collection lines. It is acknowledged that there is a level of risk associated with the unlikely event of a spill, and in some project areas, the risk may be elevated due to the proximity to steelhead bearing streams. It would be speculative to quantify the likelihood of a spill and whether such a spill would result in adverse effects to steelhead and critical habitat. The overall level of risk during project operation is greatly reduced when one considers the project design and operational requirements. The preferred project description indicates that a stormwater plan is prepared and that stormwater storage with the capability of reprocessing stormwater through the treatment plant is possible (Appendix Q, Exhibit Q3-1 of). The operation of the project will be

subject to an operations manual that includes an action plan to implement contingency measures in the unlikely event of a spill. Project developments have been sited to avoid steelhead bearing streams and their tributaries with adequate setbacks. Project designs incorporate elements to curtail and contain spills in an unlikely spill event. The commentor is directed to the preferred project description contained within Appendix Q for a detailed description of the design elements. Specific engineering designs for all elements have been prepared for the project's Coastal Development Permit application.

See also Topical Response 10, Infiltration, Inflow, and Exfiltration, addressing infiltration, inflow, and exfiltration, and Topical Response 12, Sewer System Management Plan, addressing the project's Sewer System Management Plan. \

Response to Comment A1-5

This comment requests that a discussion be provided that addresses how the installation of the facility may influence water use or anthropogenic growth and development, in-turn resulting in impacts to steelhead and critical habitat over the long-term. It is anticipated that the proposed project would result in an increase in anthropogenic growth but a decrease in water use within the community of Los Osos. The Los Osos Community Services District Urban Water Conservation Plan would result in a 10 percent per capita water demand reduction. See also Topical Response 9, Water Conservation Measures.

Response to Comment A1-6

This comment seeks clarification on whether the project will affect the amount and extent of surface flow in any steelhead bearing streams. The project would not affect the amount and extent of surface flow in steelhead bearing streams. Project impacts to steelhead bearing streams will be limited to the trimming of a few trees during installation of pipelines at the Los Osos Creek bridge crossing and Warden Creek bridge crossing. No in-stream work will be required and no developments are proposed within steelhead bearing streams. Project operation will not result in a change in runoff values from pre-project conditions. Post-project surface flows are anticipated to be the same as pre-project flows including the treatment plant site with its stormwater storage and storm drain outfall to a tributary of Warden Creek.

Response to Comment A1-7

This comment is seeking confirmation that there will be no direct discharge of wastewater or treated effluent into steelhead bearing streams or water bodies that connect to steelhead bearing streams. The proposed project would not result in any discharge, direct or indirect, of wastewater or treated effluent into steelhead bearing streams or tributary waters to steelhead bearing streams. All wastewater will be contained within the collection and conveyance system pipelines and treatment facility during operation. Some of the treated effluent will be contained within conveyance pipelines that will directly connect to the leachfield element on the Broderson property. The remaining treated effluent will be discharged via sprayfields for evapotranspiration within upland areas on the Tonini property.

It should be acknowledged that the tributaries to Warden Creek on the Tonini property will be enhanced from their current state as a result of the land use conversion resulting from the project. The removal of grazing and agricultural activities within and around the drainages on the Tonini property will result in an increase in water quality and stream function. Under pre-project conditions, these resources are exposed to direct disturbance and degradation from agricultural activities (in-stream equipment use, stream course diversion, disruption of natural hydrology, etc) and cattle use (excessive trampling, direct water contact, fecal deposition, grazing, etc.). These adverse uses under pre-project conditions would no longer occur under post-project conditions. The project's beneficial effects would have immediate and long-term value to downstream waters within Warden Creek and flows discharging into Morro Bay and steelhead-bearing waters.

Response to Comment A1-8

This comment requests that potential risks and impacts that may result from runoff at the facility site, leachfields, and sprayfields into steelhead bearing streams be discussed and identified. The comment further asks how runoff from these sites is to be contained or treated. See Draft EIR Section 5.3, Drainage and Surface Water Quality, and Appendix E, Drainage and Surface Water Quality, for discussion on drainage and surface water quality.

For all project elements, runoff during construction will be maintained through the implementation of project specific stormwater runoff Best Management Practices, in accordance with objectives outlined in the County of San Luis Obispo Storm Water Management Plan. Adherence to the Storm Water Management Plan would ensure that water quality standards and waste discharge requirements are not violated and the project is in compliance with National Pollutant Discharge Elimination System and Central Coast Regional Water Quality Control Board requirements. A Storm Water Pollution Prevention Plan shall also be prepared in accordance with the guidelines and requirements provided by the State Water Resources Control Board. The project would also adhere to the requirements outlined in the project specific Sedimentation and Erosion Control Plan. Compliance with these standard conditions during construction would prevent runoff-related impacts to steelhead bearing streams.

The leachfield and sprayfield elements of the project are not anticipated to result in risks or impacts associated with runoff during operation. The leachfield element does not include the development of any permanent aboveground structures or other developments that would result in an increase in surface runoff. Surface runoff would remain relatively unchanged during the operation of the leachfield due to the shallow excavation depths required and the use of gravel and native soil substrate to promote continued percolation of surface water flows. The sprayfields will not be operated during rain events and therefore would not contribute to excessive runoff. Evapotranspiration during operation would not result in any excessive runoff during the remaining portions of the year.

The treatment facility for the preferred project is not anticipated to result in risks or impacts associated with runoff during operation. The treatment facility is designed to ensure that water quality standards are met and that pre-project runoff values remain unchanged during project operation. Stormwater runoff will be collected within the project's storm drain system and then directed into detention ponds for storage and treatment onsite. As such, operation of the treatment facility will not result in the discharge of untreated runoff or result in a change in runoff values from pre-project conditions. No runoff-related impacts to steelhead bearing waters and critical habitat are anticipated to result from treatment facility operation. See also Topical Response 11, Construction and Post-Construction Stormwater.

Response to Comment A1-9

This comment states that the Draft EIR should disclose that consultation with NMFS is necessary prior to undertaking the project, and that NMFS should be included on the list of federal agencies to be consulted with. NMFS is included as a federal agency being consulted with in Section 5.5 of the Draft EIR and Appendix G as well as under the project's discretionary actions and responsible agencies in Section 3.4.2 of the Draft EIR.

Due to the fact that the preferred project is not likely to adversely affect steelhead or critical habitat, formal consultation with NMFS may not be necessary. Informal consultation with NMFS would likely be undertaken by the State Water Resources Control Board, who may, in turn, defer informal consultation responsibilities to the County.

Mitigation Measure 5.5-A1 is modified to state the following:

5.5-A5 ~~The proposed project may result in take of federally listed species and their habitat. Prior to project approval, the County shall enter into formal consultation with the USFWS and NMFS. A Biological Opinion (BO) will be prepared by the USFWS and NMFS for any proposed action which may result in potential take of a listed species and its habitat. Pending the determinations made by the USFWS and NMFS in a forthcoming BO, the proposed project will be required to fulfill all mitigation obligations and conservation measures conditioned in the BO regarding federally listed species and the their habitat. This will include preconstruction survey and avoidance measures, and compensatory mitigation for loss of occupied habitat to be incorporated and implemented prior to project development.~~

~~Specific avoidance measures, preconstruction survey requirements, and mitigation measures, if required, will be provided by the USFWS through Section 7 (or possibly Section 10) consultation with regard to federally-listed species.~~

The proposed project may affect federally-listed species (Morro shoulderband snail and California red-legged frog) and as such, the USEPA shall initiate formal consultation with USFWS pursuant to Section 7(a)(2) of the federal ESA. All mandatory terms and conditions, and reasonable and prudent measures pertaining to incidental take prescribed within the Biological Opinion and Nationwide Permit for the project the shall be fulfilled and implemented.

State of California—Health and Human Services Agency
California Department of Public Health

MARK B HORTON, MD, MSPH
Director

ARNOLD SCHWARZENEGGER
Governor

RECEIVED

JAN 26 2009

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PUBLIC WORKS

January 23, 2009

Mark Hutchinson
Environmental programs Manager
San Luis Obispo County Dept of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

Re: Draft EIR County of SLO, Los Osos Wastewater Project
State Clearinghouse No. 2007121034

Dear Mr. Hutchinson

The California Department of Public Health, Division of Drinking Water (CDPH), has review your Draft EIR dated November 14, 2008. The project in general will provide collection, treatment and disposal of wastewater in the Los Osos area. The current individual septic tank and leach field disposal of effluent in the Los Osos area will be abandoned. CDPH commends the County of SLO on their hard work and persistence over the years concerning this issue.

The two primary purposes of the project are the compliance with the Waste Discharge requirements of the RWQCB and alleviating groundwater contamination, primarily nitrates, which have occurred by the use of septic systems throughout the community of Los Osos. The Los Osos area consists of about 15,000 residents. Another important consideration of the project involves the water resources issues in the community mainly related to seawater intrusion.

A2-1

The Draft EIR contains four alternatives that are examined at an equal level of detail. All four alternatives will meet the objectives of the project. Two main differences between these four alternatives and previous projects are the location of the treatment facility and the disposal method. The location of the treatment facility will be out-of-town and the disposal of the treated effluent will include a spray field. One portion of the project which has stayed consistent is the disposal at the Broderson site. The disposal of effluent at the Broderson site has been reduced significantly since the last project proposal. The CDPH recommends monitoring wells be established to monitor the effluent disposal at the Broderson site. The Regional Water Quality Control Board (RWQCB) is the lead agency in the determination of the disposal site with relation to wastewater discharges. Based on the information received by CDPH at this time, we would recommend to the RWQCB that the Broderson site be considered a disposal

Southern California Drinking Water Field Operations Branch
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project. We would recommend additional information be gathered during the project to verify this conclusion utilizing properly located monitoring wells. Additionally, any updated information on the travel time from the disposal site to domestic water supply wells under various flow conditions needs to be presented to the RWQCB and CDPH. A2-1 CONT

The Draft EIR includes the use of tertiary water irrigation meeting the Title 22 reclamation requirements. The County of SLO will need to provide to the CDPH and the RWQCB a Title 22 engineering report that complies with the Water Recycling Criteria if recycled water is proposed. A2-2

The spray field will be managed as an effluent disposal site. Any domestic water supply wells, including any private wells in the area, need to be identified and the distance to the spray disposal area confirmed. A2-3

The County of SLO and the local water agencies need to continue to work together to manage the water resources in the basin. The basin is identified as overdrawn at this time and seawater intrusion has been identified in some areas. A2-4

If you have any questions, please call this office at (805) 566-1326.

Sincerely,

Kurt Souza, P.E., Chief
Southern California Section
CDPH-DWFOB

Cc: SLO County EHD

Los Osos\recycled\L 01 2009.doc

California Department of Public Health, Kurt Souza, January 23, 2009 (Letter A2)

Response to Comment A2-1

This comment expresses a desire to establish monitoring wells to monitor effluent disposal at the Broderson site. Page 3-43 of the Draft EIR includes a description of the Broderson leachfield and states that monitoring wells will be used to monitor the effects on the groundwater. Appendix Q Section Q.3, Preferred Project Descriptions, provides more details on the types of wells and their locations.

Response to Comment A2-2

This comment expresses the need for the study to provide an engineering report on the use of recycled water if tertiary treatment will be used. The proposed project proposes secondary treatment meeting the waste discharge requirements of the Regional Water Quality Control Board. Site plans for the treatment plant include a location for future tertiary treatment facilities, if required. If in the future it is determined that some or all of the treated effluent should be treated to a higher level for reuse, then the entity proposing that use (County and/or others) would comply with the Water Recycling Criteria as well as all other applicable statutes and regulations. See also Topical Response 4, Tertiary Treatment.

Response to Comment A2-3

This comment expresses a concern regarding the identification and distance between private wells and the proposed sprayfields. All existing wells (4) on the Tonini site have been located on the overall site plan (see Appendix Q's Exhibit Q.3-2). Before any of the wells are utilized for domestic purposes, the County will verify proper well construction and adequate setbacks (100 feet) from the sprayfield. If none of the existing wells is suitable for domestic use, a new well will be constructed at the treatment plant site for this purpose.

Response to Comment A2-4

This comment states that the County and local water agencies need to continue to work together to manage the water resources in the basin. Because there are no comments on the contents of the Draft EIR, no further response is required.

January 30, 2009

Mr. Mark Hutchinson
Environmental Programs Management
San Luis Obispo County Department of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

Dear Mr. Hutchinson:

The Board of Directors of the Los Osos Community Services District (District) has authorized the submission of the following comments on the Draft Environmental Impact Report (DEIR) for the proposed Los Osos Wastewater Project.

Comments 1 through 5 relate to overall water management issues within the entire groundwater basin, comment 6 pertains to construction impacts related to the District's role as a provider of water, solid waste, and emergency services, and comments 7 through 9 identify issues relate to the operation of the waste treatment facility and collection system.

Water Management Issues.

1. The co-equal alternatives analyzed in the DEIR contemplate a secondary level of treatment utilizing one of three technologies. However, because it is likely that tertiary treatment will be required, even in the initial years of operation to facilitate purveyor strategies such as agricultural and urban reuse, the DEIR should fully address the impacts, including chemical usage, air quality, traffic, etc. associated with tertiary treatment. An issue of particular importance that should be addressed is the impacts of emergent contaminants on our water supply. This would allow the County to include an option for tertiary treatment in its pending design/build process. Please clarify that all tertiary treatment impacts have been fully addressed in the DEIR. A3-1

2. The DEIR includes an analysis of the impacts of water conservation measures on basin water resources. This analysis raises a number of issues that must be addressed/clarified. Showerheads and toilets are mentioned as minimum conservation measures to be implemented. The full scope of the water conservation projects contemplated in the DEIR needs to be clarified. Additional measures such as water meters in the S&T Mutual service area should also be identified and analyzed to facilitate mitigation monitoring and winter period billing. **Please clarify if the calculation of potential water savings are based on current consumption data from the purveyors, which has indicated a substantial** A3-2

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reduction in water usage over the past three years. Once water conservation measures are in place, what will be done to ensure that the sea water intrusion benefit is actually realized, since the urban purveyors control the production volume pumped from the west side of the lower aquifer? A3-2 CONT

3. The Broderson effluent disposal site is analyzed in each of the co-equal alternatives. In various community meetings, the County has indicated that the use of the site would start at a minimum value and then ramp up over time to avoid impacts to down-gradient properties and to stay below recharge regulation thresholds. Please clarify how this would occur in the context of gradual community build-out, while still maintaining the project's seawater intrusion mitigation. In the event of a lower level of seawater benefit due to actual leach field performance, please identify other mitigations measures that would be imposed to reach the targeted goals. A3-3

4. Both the District and Golden State Water Company are pursuing water supply projects that utilize the upper aquifer. Please clarify how the DEIR addresses impacts to the yield of the upper aquifer caused by the removal of septic returns flows. A3-4

5. The projects identified in the DEIR are sized to accommodate the build out of the prohibition zone. What alternatives, including capacity charges and assessments, are being considered to fund that portion of the project designed to serve vacant and underdeveloped properties? A3-5

Construction Impacts.

6. The District currently provides water, drainage, solid waste, and emergency services to portions of the community within the proposed collection system area. During the issuance of the previous project's Coastal Development Permit, potential construction-related impacts to these services were identified and mitigated. These construction related impacts should be addressed in the DEIR.

   a) *Traffic Impacts*. Because of the potential impact on the District's ability to provide essential services during construction, construction impacts on traffic need to be addressed in the DEIR. A traffic mitigation plan should be prepared prior to the commencement of construction which would include location of equipment and trenches to be used, sequencing/phasing of installation, the location of materials and equipment staging areas, and proposed detour routes. The traffic mitigation plan should also provide for adequate emergency access, measures to avoid creating safety hazards to school children and other pedestrians, and measures to require routing of construction-related vehicles to minimize impacts to sensitive land uses. A3-6

   b) *Drainage Impacts*. Construction may affect a large volume of natural storm water drainage flows and groundwater. Treatment of storm water and groundwater may be required and analysis of those impacts should be a part of the DEIR, including possible A3-7

treatment required, treatment method and location, and maintenance/disposal method of collected contaminants. A3-7 CONT

c) *Utility Impacts*: Because of the potential impact on the District's ability to provide water services during construction, construction impacts on waterlines and other District facilities need to be addressed in the DEIR. A3-8

Operational Impacts.

7. Because of concerns regarding the impact on the waste treatment facility caused by infiltration of water into the collection system, please clarify the amount of infiltration (and exfiltration) that can be expected if the pipe joints are of the bell and spigot type relative to the use of fusion welded high density polyethylene. Are additional measures being required in the design/build process to ensure long term water tightness of the pipe joints . A3-9

8. The electrical usage calculations included in the DEIR were derived from the Fine Screening Analysis and subsequent work efforts. Because of concerns regarding the cost of the operation of the wastewater facility and its impacts on greenhouse gases, the electrical usage calculations need to be accurate. Since the power consumption comparison for the STEP and gravity systems in the DEIR appears materially different when compared to previous reports, does the County intend to do further life cycle or energy cost analysis between these alternatives, or will such an analysis be included as part of the design/build process? A3-10

9. Potential impacts stemming from operational maintenance activities associated with the wastewater facilities and collection systems within road right-of-ways should be identified and analyzed in the DEIR with emphasis on traffic routing and local and residential access. A3-11

Thank you for addressing the above-referenced comments. If you have any questions, or if you need clarification, please contact our office at 528-9370.

Sincerely,

John B. Schempf
General Manager

Cc: LOCSD Board of Directors
File

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Los Osos Community Services District, John B. Schempf, January 30, 2009 (Letter A3)

Response to Comment A3-1

This comment expresses a desire for clarification regarding tertiary treatment impacts. See Topical Response 4, Tertiary Treatment, regarding agricultural re-use and corresponding impacts.

Response to Comment A3-2

This comment expresses a desire for clarification regarding the calculation of potential water savings. See Topical Response 9, Water Conservation Measures, regarding the measures that will be implemented and who will be implementing them.

Response to Comment A3-3

This comment expresses a desire for clarification regarding groundwater recharge and the proposed project's seawater intrusion mitigation. The "ramp-up" of the Broderson site effluent disposal rates—beginning below the proposed maximum of 448 acre feet/year—is independent of future growth in the community. The ramp-up is solely to verify the extensive analysis already performed to date on the Broderson site. Future growth, if it occurs, is dependent on several other factors, including providing solutions to water supply and habitat issues. The Broderson site is anticipated to provide 99 acre feet/year of seawater intrusion mitigation; the conservation program would provide 88 acre feet/year of seawater intrusion mitigation. Given that the project would have a seawater intrusion impact of 90 acre feet/year, the project would provide approximately double the needed mitigation amount. Consequently, each mitigation effort—whether Broderson or conservation—provides backup for the other.

Response to Comment A3-4

This comment expresses a desire for clarification regarding how the Draft EIR addresses impacts to the upper aquifer. The LOWWP is designed with the Broderson disposal component to replace septic system recharge to the upper aquifer system and provide for future increases in disposal that could accommodate future increases in pumping.

Response to Comment A3-5

This comment expresses a desire for clarification regarding project size alternatives. See Topical Response 2, Project Costs.

Response to Comment A3-6

This comment expresses a concern that because of the potential impact on the District's ability to provide essential services during construction, construction impacts on traffic need to be addressed in the Draft EIR. Mitigation Measure 5.8-A1 on page 5.8-23 of the Expanded Traffic and Circulation Analysis includes mitigation for the preparation of a Traffic Management Plan prior to construction.

Response to Comment A3-7

This comment expresses the desire to include an analysis regarding construction impacts to stormwater and groundwater. The Draft EIR analyses project impacts to the extent they can be known. The exact volume of stormwater or de-watering flows cannot be known at this time. However, from an environmental impact perspective, current California construction stormwater regulations, as expressed in the Statewide General Construction Stormwater Permit (see http://www.waterboards.ca.gov/ water_issues/programs/stormwater/construction.shtml) require that all construction stormwater and dewatering flows be handled in a manner that prevents contaminated water from impacting adjacent waters, including groundwater. Construction contractors will, as a matter of law, be required to implement Stormwater Pollution Prevention Plans tailored to the specific methods and timing of construction. Water generated by de-watering activities will be required to comply with the terms and conditions of a permit issued by the Regional Water Quality Control Board. If construction water requires treatment, that treatment would be tailored to the specific contaminants targeted for removal. If required, portable treatment systems, designed for construction purposes, could be employed on a temporary basis as the project proceeds.

Response to Comment A3-8

This comment expresses a concern about potential impacts to existing utilities (water) from construction activities of the LOWWP. The construction contractor is required by normal construction practices and County permit conditions to take steps necessary to identify the location, depth, and nature of all existing utilities in the vicinity of any excavation work to avoid disrupting the service. This is required through services such as “USA Alert” or “Dig Alert” that coordinate all utilities to mark their existing utilities found to be present. Should the project interrupt or require changes to a utility service, it will be the responsibility of the project to provide repairs or relocation so that service is restored in a prompt manner. Impact 5.7.D in Section 5.7 in the Draft EIR identified potential accidental breaks in the main water supply line during construction activities.

Response to Comment A3-9

This comment expresses a desire for clarification regarding the amount of infiltration and exfiltration associated with pipe joints. See Topical Response 10, Infiltration, Inflow and Exfiltration.

Response to Comment A3-10

This comment expresses a concern regarding the power consumption comparison between the STEP/STEG and gravity system. Ongoing operational and maintenance costs, including energy costs, are a part of the “best-value” considerations in the design/build process.

Response to Comment A3-11

This comment requested that the traffic impacts associated with the operational maintenance activities need to be evaluated. Section 5.8 in the Draft EIR and Appendix J-1 included an evaluation of long-term operational impacts. This evaluation assessed the potential impacts on the operations of the roadway segments and intersections. If operational maintenance activities require substantial repair activities, the implementation of Mitigation Measure 5.8-A1 would be appropriate; however,

maintenance activities are expected to be short-term, thus resulting in short-term and less than significant traffic impacts.

California Regional Water Quality Control Board
Central Coast Region

Linda S. Adams
Secretary for
Environmental Protection

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Arnold Schwarzenegger
Governor

January 30, 2009

Mr. Mark Hutchinson
Environmental Programs Manager
County of San Luis Obispo, Department of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

Dear Mr. Hutchinson:

STATE CLEARING HOUSE NO. 2007121034 REVISED DRAFT ENVIRONEMENTAL IMPACT REPORT: LOS OSOS WASTEWATER PROJECT, SAN LUIS OBISPO COUNTY, CALIFORNIA

Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff has reviewed the County of San Luis Obispo's (County) Draft Environmental Impact Report (DEIR) for the Los Osos Wastewater Project (LOWWP). Thank you for the opportunity to comment on your DEIR. We greatly appreciate the County staff and Board of Supervisors work on solutions for wastewater management in Los Osos. We also appreciate the efforts of citizens who have participated in these County efforts and have contributed their efforts toward a positive result.

We understand that the primary goal of the LOWWP is to construct and operate a community wastewater collection, treatment and disposal system for approximately 15,000 residents, thereby complying with the Water Board's Resolution No. 83-13 (prohibition of waste discharges from individual sewage disposal systems within Los Osos/Baywood Park Area). Eliminating discharges from onsite septic systems, as directed by the Water Board, will also help accomplish the LOWWP's second goal of alleviating groundwater contamination from nitrate that has occurred because of the use of septic systems throughout the community.

The proposed project will consist of three main components: wastewater collection; wastewater treatment, which includes biosolids processing and disposal; and effluent disposal. Central Coast Water Board staff understands that the County is examining four primary alternatives on a coequal basis, as described in Section 3.3.2. of the DEIR. The preferred LOWWP project the county selects could be any one of the four alternatives or a different combination of project components. Central Coast Water Board staff is optimistic that the flexibility to mix and match project components will greatly increase environmental quality of the final wastewater project.

The California Environmental Quality Act requires that an environmental impact report identify the environmentally superior alternative from among the range of alternatives considered. All four of the proposed projects meet the project goals and objectives. However, the County has determined that the environmentally superior alternative is Proposed Project No. 4. Proposed Project 4 consists of a facultative pond treatment plant located at the Tonini property, a gravity collection system, a main pump station located at the Mid-Town site, and spray field disposal at the Tonini property and leach field disposal at the Broderson site.

Water Board staff understands that the DEIR evaluated many potentially significant impacts. With mitigation these potential impacts will not cause additional environmental impacts. However, the DEIR identifies two unmitigatable significant impacts (i.e., agricultural resources and nonrenewable resources), but the improvements in water quality far outweigh impacts that will result for the execution of this project. Central Coast Water Board staff provides the following comments.

Long-Term Maintenance for the Wastewater Treatment Plant

The DEIR lacks a discussion of long term operations and maintenance for the proposed wastewater treatment plant. Central Coast Water Board staff recommends that the final EIR incorporate a discussion of long-term operations and maintenance of the wastewater treatment plant through a public or private agency. It is our experience that secondary or tertiary treatment facilities require a high level of oversight to maintain adequate environmental conditions for superior biological treatment. It is our strong recommendation that community wastewater facilities be owned and operated by public agencies. A4-1

Dewatering of Polluted Groundwater Encountered During Construction Activities

Appendix E of the DEIR describes dewatering activities associated with the construction and installation of the wastewater collection system. Although Appendix E discusses the need to enroll in the General National Pollutant Discharge Elimination System Permit for Discharges with Low Threat to Water Quality (Low Threat Permit or Order No. R3-2006-0063) if the County requires dewatering, the County needs to consider the eligibility requirements for such discharges. In other words, if the County encounters groundwater during the construction activities that require dewatering to continue construction, then the County will be responsible for enrolling in the Low Threat Permit or have some other mechanism available to address excess water. The Low Threat Permit requires the discharger to analyze the proposed water for pollutants prior to gaining coverage under the Low Threat Permit and permission to discharge to surface waters. The quality of water proposed for discharging is required to comply with water quality criteria listed in Attachment D of the Low Threat Permit. If these criteria are not met, then the discharge will not be eligible for enrollment under the Low Threat Permit and, therefore, the County may have to address any excess trench water through another method or alternative plan. Even if the water proposed for discharge complies with the water quality criteria in Attachment D, the County will be required to adhere to A4-2

the discharge prohibitions, effluent limitations, and monitoring and reporting requirements contained in the permit. A4-2 CONT

Pipeline Trenching Impacts Associated with the Proposed STEP/STEG Alternative

The DEIR does not describe the trenching or boring depths needed for implementation of the STEP/STEG system described in Proposed Project Alternative No. 1. Project descriptions for all project alternatives explain that pipeline trenching for collection system installation will require a 20-foot wide disturbance area, but does not explain the depth at which this disturbance will occur. Furthermore, we understand that shallower trenching may result in lesser environmental impacts (i.e., ground disturbance, dewatering, etc.). The County should expand on their environmental impact evaluations regarding trenching associated with the installation of the STEP/STEG system as described in Proposed Project Alternative No. 1. This description should discuss potential environmental impacts associated with dewatering activities as a result of deeper versus shallower trenching. A4-3

Maintenance Agreement with STEP/STEG Owners

The DEIR does not discuss a mechanism between the County and the private property owners to ensure adequate access and operations and maintenance of the STEP/STEG tanks. Section 2.4.1. of the County's DEIR evaluates two systems for wastewater collection: STEP/STEG and gravity. If a STEP/STEG collection system is chosen for the final project, the County should consider formal legal agreements between the private owners and the County to ensure longevity of the STEP/STEG tanks. Without proper operation and maintenance, the tanks may fail leading to environmental and public impacts. The County should discuss long-term operation and maintenance for the STEP/STEG tanks in the DEIR. Even though the preferred project is a gravity collection system, there are likely individual lots or neighborhoods where a STEP/STEG or other type of pumped system will be needed. A4-4

Salt Management for Proposed Disposal Areas

Salt management is important in addressing the potential impacts for salt accumulation in groundwater aquifers. The only discussion of salt management in Section 2.4 (Project Components) and Section 5.2 (Groundwater Resources – Cumulative Impacts) of the DEIR, is regarding saltwater intrusion. The DEIR does not discuss potential salt accumulation due to the continuous disposal of wastewater in a designated location, specifically, spray field irrigation at the Tonini property and at the leach field at the Broderson site. Salt buildup in upper groundwater aquifers is a common problem in the Central Coast Region due to a mixture of agricultural irrigation practices and land disposal of treated wastewater. Excessive salt build up in groundwater aquifers has the potential to render the aquifer useless for future agricultural or domestic supply water use. A4-5

Section 5.2.1. (Environmental Setting) of the DEIR states that "The areas of the basin with higher TDS concentrations in shallow groundwater have been found to correspond

roughly to some of the areas of higher NO3-N (nitrate) concentrations. This may result from brine reject from domestic water softeners or other normal salt loading from domestic water use that is subsequently discharged from septic disposal systems." This suggests that salts from the treated wastewater might be an issue; especially if these treated wastewater flows are concentrated in a specific location (i.e., Tonini property and Broderson site).

Section VIII.C.4 of the Central Coast Water Quality Control Plan (Basin Plan) discusses the need for salt management and improved salt management techniques. Some suggestions provided in Section VIII.C.4 of the Basin Plan include using wet weather storage reservoirs to dilute groundwater, improving the quality/quantity of the groundwater aquifer. Also, this section discusses the use of drainage wells which divert rainwater to salt sinks in order to increase dilution. A4-5 CONT

Although these techniques may not be required, we anticipate that salt management would be a component of wastewater operations. Water Board staff will consider incorporating requirements for salt management in our waste discharge requirements.

Designing the Leach Field at the Broderson Site

In many instances, leach field systems are constructed with inadequate design considerations, which can lead to odors or nuisance, surfacing effluent, disease transmission, and pollution of surface water or groundwater. The DEIR did not discuss the design of the leach field disposal system. This evaluation should include consideration of capacity dependant on estimated build-out, peak daily flows (including the consideration of using spray fields at the Tonini property), consideration of inflow/infiltration, development of a maintenance manual, consideration for nitrogen loading, setbacks from domestic supply wells, and other requirements. These issues and requirements must be included in the final project proposal prior to the issuance of waste discharge requirements. A4-6

Broderson Site Stormwater Capture, Disposal Rate Monitoring and Mitigation, and Increased Potential for Liquefaction

Appendix E-1, Section 5.3 of the DEIR states that "[t]he leachfields would be designed so that stormwater runoff does not leave the site. Grading would contour the earth to ensure that runoff passes into the leach trenches and infiltrates to the groundwater below." This concept is consistent with Section VIII.C.4 of the Basin Plan/Salt Management as mentioned above. However, since stormwater capture will be designed to assure that precipitation runoff will not move down slope of the site, the County needs to explain the potential impacts of increased percolation levels to the perched aquifer (e.g., liquefaction zone present in the 5 to 10 feet below ground surface) associated with the stormwater capture design. A4-7

The DEIR explains that monitoring changes in groundwater levels down gradient of the Broderson site will assure that any changes "will remain less than significant." However, the DEIR fails to present a mitigation plan describing the best methods to

respond to incremental changes in groundwater levels that would allow for continued safe use of the disposal fields relative to potential destabilizing the hillside below the Broderson site, increasing liquefaction potential or limiting the amount of unsaturated soil available for effluent treatment.

The DEIR does not to provide discussion on mitigation for disposal design for Waste Water Treatment Plant Operations should monitoring data show that changes in the groundwater levels require a decreased disposal rate for the Broderson site. The EIR states that monitoring will occur to determine if the Broderson site could safely increase the level of disposal operations. However, no discussion is presented to state how the plant operations will be conducted if the Broderson site disposal rates must be decreased due to destabilization of the hillside below the disposal site. Since the Broderson site is a critical component of all four project alternatives, and because it needs to be designed to accept disposal year-round, including during the rainy season, the County should explain how disposal operations will be affected and what potential options will be available to replace any required reduction in disposal levels at Broderson. A4-7 CONT

Water Board staff will evaluate the County's waste discharge application to ensure compliance with Basin Plan design criteria, siting criteria, disposal monitoring, and associated operations and management procedures for the proposed the Broderson site leach field system. Staff will consider incorporating requirements that are specific to the design and management of the proposed disposal system.

Effluent Quality

Please describe design/expected nitrogen concentrations in the effluent from the various treatment methods. Page 3-57 says a separate nitrogen removal process is required for Proposed Project No. 4, what is it and what are the expected monthly average and daily maximums? What is the margin of safety for meeting effluent requirements? Note that Table 2-1 should refer to Biochemical rather than Biological Oxygen Demand. A4-8

Incidental Runoff from Spray Disposal

Incidental runoff refers to runoff due to sprinkler over-spray that leaves the intended and permitted disposal area. Incidental runoff of treated wastewater to surface waters is prohibited without proper permitting. Incidental runoff may occur from over watering, pipe leaks, improper maintenance, and/or irrigation during wet weather events. Incidental runoff discharges into surface waters can lead to nuisance, surface water contamination, and impacts to aquatic life. We expect the development of long-term operations and maintenance protocols to adequately manage spray disposal activities. Central Coast Water Board staff will incorporate prohibitions for unpermitted discharges of treated wastewater to surface waters in our waste discharge requirements. A4-9

Existing Septic System Abandonment

The DEIR briefly discusses abandonment of the existing septic systems, which will be a major component of the LOWWP. According to Section 3.4.2. (Septic Tank Abandonment) of the DEIR, "the SLOC [San Luis Obispo County] Department of Planning and Building requires that the private property owners pump out abandoned septic tanks and provide a copy of the receipt for pumping to the area inspector. According to the SWRCB National Pollution [sic] Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ), removing the abandoned tanks will require preparing a Storm Water Pollution Prevention Plan (SWPPP) as described above. The County will prepare a SWPPP for the entire project, including LOWWP construction and both publicly and privately financed related actions that are required such as septic tank abandonment."

The above statement alludes to removing the existing septic systems by excavation. Water Board staff foresees potentially major environmental impacts (i.e., stormwater, groundwater, etc.) from the removal of approximately 15,000 septic systems by excavation. Although a SWPPP will be required for projects that disturb one acre or greater, the combined impacts from the removal of 15,000 septic systems might not be mitigated through the implementation of a SWPPP. A4-10

Another option for abandonment of existing septic systems might include in-place abandonment. It appears that San Luis Obispo County Ordinance Title 19.01.040 makes reference to septic tank abandonment requirements of the California Plumbing Code (Appendix K.11.b.). This code allows abandoning septic systems in-place rather than excavation. This option should be considered as it might yield less disturbance to the surrounding environment and be less of a financial burden on Los Osos residents.

We recommend that the County address potential septic system abandonment alternatives (e.g., abandon in place), potential environmental impacts of septic tank removals, and associated costs for abandonment.

Stormwater Municipal Permit

The County is currently subject to the National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit (General Permit). As part of its responsibility, the Central Coast Water Board must determine permittees' compliance with General Permit requirements. This includes determining whether municipalities have reduced pollutant discharges to the Maximum Extent Practicable (MEP)[1]. The MEP standard is an ever-evolving and flexible standard which balances technical feasibility, cost, effectiveness, and public acceptance. The General Permit requires permittees to prevent or minimize water quality impacts from new development and A4-11

[1] "Permittees must implement Best Management Practices (BMPs) that reduce pollutants in storm water runoff to the technology-based standard of Maximum Extent Practicable (MEP) to protect water quality." Effluent Limitations, General Permit Fact Sheet, pg. 6.

redevelopment projects[2]. The volume and velocity of storm water discharged from impervious surfaces can cause increased bank erosion and downstream sedimentation, scouring, and channel widening which significantly impact aquatic ecosystems and degrade water quality. The County Storm Water Management Programs (SWMP) is required to address how new and re-developments maintain pre-development hydrologic characteristics, such as flow patterns, surface retention, and recharge rates in order to minimize post-development runoff impacts from the LOWWP. In most cases, MEP standards are not met by conventional site layouts, construction methods, and storm water conveyance systems with "end of pipe" basins and treatment systems that do not address the changes in volume and rates of storm water runoff and urban pollutants (including thermal pollution). Low Impact Development (LID) practices meet the MEP standard and are more effective at reducing pollutants in storm water runoff at a practicable cost.

LID is an alternative site design strategy that uses natural and engineered infiltration and storage techniques to control stormwater runoff where it is generated. The objective is to disperse LID devices uniformly across a site to minimize runoff. LID serves to preserve the hydrologic and environmental functions altered by conventional stormwater management. LID methods provide temporary retention areas, increase infiltration, allow for pollutant removal and control the release of stormwater into adjacent waterways (Anne Guillette, Whole Building Design Guide). For further reference please see:

http://www.epa.gov/owow/nps/lid/

A4-11 CONT

Eight Common LID Practices Include:

1. Reduced and Disconnected Impervious Surfaces
2. Native Vegetation Preservation
3. Bioretention
4. Tree Boxes to Capture and Infiltrate Street Runoff
5. Vegetated Swales, Buffers, and Strips
6. Roof Leader Flows Directed to Planter Boxes and Other Vegetated Areas
7. Permeable Pavement
8. Soil Amendments to Increase Infiltration Rates

Water Board staff considers a project that meets the following descriptions (inclusive) to be a "Low Impact Development" project:

A. Runoff Volume Control. The pre-development stormwater runoff volume is maintained by a combination of minimizing the site disturbance, and providing distributed retention BMPs. Retention BMPs are structures that retain the excess (above pre-development project volumes) runoff resulting from the development for the design storm event (2-, 10-, and 25-year, 24-hour duration storm). Note that "retention" is required, as opposed to "detention"; retention may be achieved using infiltration methods, and capture-for-use methods.

[2] "Post-Construction Storm Water Management in new Development and Redevelopment – The Permittee must: 1) Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects...by ensuring that controls are in place that would prevent or minimize water quality impacts", General Permit, pg 11, Provision e.1.

B. Peak Runoff Rate Control. Low impact development practices maintain the pre-development peak runoff discharge rate. This is done by maintaining the pre-development time of concentration and then using retention and/or detention BMPs (e.g., rain gardens, open drainage systems, etc.) that are distributed throughout the site, to control runoff volume. If retention practices are not sufficient to control the peak runoff rate, detention practices may be added.

C. Flow Frequency Duration Control. Since low impact development emulates the pre-development hydrologic regime through both volume and peak runoff rate controls, the flow frequency and duration of post-development conditions must be identical (to the greatest extent possible) to those of pre-development conditions. Maintaining pre-development hydrologic conditions will minimize or eliminate potential impacts on downstream habitat due to erosion and sedimentation. A4-11 CONT

Permittees must, therefore, incorporate LID methodology into new and redevelopment ordinances and design standards unless permittees can demonstrate that conventional BMPs are equally effective, or that conventional BMPs would result in a substantial cost savings while still adequately protecting water quality and reducing discharge volume. In order to justify using conventional BMPs based on cost, permittees must show that the cost of low impact development would be prohibitive because the "cost would exceed any benefit to be derived." (State Water Resources Control Board Order No. WQ 2000-11.). Low Impact Development techniques must be included as mitigations in the final EIR for this project.

We welcome the opportunity to meet with County staff to discuss both wastewater and stormwater issues as the project evolves. If you have questions, please contact **David LaCaro at (805) 549-3892** or at dlacaro@waterboards.ca.gov.

Sincerely;

Roger W. Briggs
Executive Officer

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California Regional Water Quality Control Board, Roger W. Briggs, January 30, 2009 (Letter A4)

Response to Comment A4-1

This comment expresses a concern regarding the lack of discussion regarding the long-term operations and maintenance for the Proposed Project. A basic assumption of the Draft EIR is that the wastewater treatment facility will be operated and maintained in conformance with all applicable laws and regulations, including any new regulations that may develop over the lifetime of the facility. The environmental effects of the operation of the facility are included in each section of the Draft EIR with a focus on traffic, air emissions, noise, greenhouse gas, etc. impacts.

Response to Comment A4-2

This comment expresses a concern regarding impacts associated with the construction and installation of the wastewater collection system. Several alternatives for construction water disposal are available for use during project construction. The water quality of the groundwater removed will dictate what means are acceptable for its disposal or re-use. Discharge to surface waters or to the stormwater sedimentation and percolation basins will require compliance with RWQCB General National Pollutant Discharge Elimination System (GNPDES) Low Threat Permit conditions.

Response to Comment A4-3

This comment expresses a concern regarding the lack of discussion regarding the trenching or boring depths needed for implementation of the STEP/STEG system. Without detailed design the exact depth of STEP/STEG collection lines cannot be known; however, it is generally understood that while collection lines can be installed at depths averaging 4 to 6 feet, some portion of the system would necessarily be deeper to avoid existing utilities. In addition, excavations for the STEP tanks require digging to a depth of approximately 8 feet. Given the number of STEP tanks required (4,769) at a required excavation depth similar to approximately 75 percent of a gravity collection system, the construction dewatering requirements of the two systems, and consequently their associated environmental effects, appear to be similar in nature. When alternative construction methods such as directional drilling can reduce both costs and environmental effects associated with dewatering, such alternatives could be employed with either system.

Response to Comment A4-4

This comment expresses a concern regarding the lack of discussion regarding the access and operation of the STEP/STEG tanks. If used, all STEP tanks would be owned and operated by the County and located in public utility easements owned by the County. These easements will need to be established adjacent to existing public utility easements or road rights-of-way to allow access for system operators at any time without prior notice. For areas outside of existing easements or rights-of-way, such as private property, the property owner would be required to provide a public utility easement. In the event, the property owner is not amenable to granting an easement on their private property, it is not clear whether this action would require eminent domain or could be established as a

condition of providing wastewater service. It is also not clear whether or not this will require additional enforcement actions by the RWQCB against individual property owners.

Response to Comment A4-5

This comment expresses a concern regarding the lack of discussion regarding potential salt accumulation. The LOWWP project will not increase salt accumulation in the Los Osos groundwater basin because the present discharge of septic systems has the same concentration of salts that would be present in the LOWWP sewage effluent. The project as mandated will remove nitrogen from the domestic effluent in the prohibition zone and dispose the water at the designed locations (Broderson and Tonini sprayfields). The salt loading evaluation for Broderson and Tonini were evaluated in the Draft EIR in appendix D-2, Hydrogeological Impacts Study. The inherent salt buildup in aquifers beneath lands used for irrigated agriculture was considered in the Draft EIR with respect to existing groundwater conditions. Utilization of LOWWP effluent or native groundwater with a comparable TDS concentration for irrigation will result in essentially the same impact to underlying soils. The salts leached into the bedrock aquifer beneath Tonini will reach an equilibrium concentration as it is an open groundwater system through which flushing occurs. The TDS concentration of treated effluent that would be used for sprayfield disposal at the Tonini site is estimated at approximately 620 mg/l and is comparable to the groundwater that underlies the Tonini site that was measured and averaged 606 mg/l. Because of the similar TDS concentrations, the effects on groundwater from using the LOWWP effluent as an irrigation source versus pumping groundwater for crop irrigation are the same. Based on these conditions the salt loading impacts to groundwater from irrigating crops with effluent at the proposed Tonini sprayfield site are considered less than significant. Also, see Topical Response 7, Alternative Disposal Options, and Topical Response 8, The Broderson Leachfield.

Response to Comment A4-6

This comment expresses a concern with the lack of discussion regarding the design of the leachfield disposal system. The Broderson leachfield design will include all of the parameters listed in this comment. Page 3-42 and 3-43 of the Draft EIR provide some of the details requested. Appendix Q, Preferred Project Evaluation Section Q.3, Preferred Project Description, provides additional details on an operational plan, monitoring wells and a stormwater runoff plan for the leachfields.

Response to Comment A4-7

This comment expresses a concern regarding the lack of discussion regarding the mitigation for disposal design for the Proposed Project. The historical percolation of storm water into the Broderson site is accommodated by the highly permeable soils. Extensive study has been conducted to evaluate the site-specific soil conditions at Broderson (see Topical Response 8, The Broderson Leachfield) which indicate that the proposed disposal rate is substantially lower than the soil capacity as tested. Soil testing at the site has demonstrated an ultimate soil infiltration capacity of 180 gallons per day per square foot. This is many times more capacity than the amount of rainfall that may be produced, even during a severe event. For example, a storm that produced 6 inches of rain in one day equates to

3.7 gallons per day per square foot. The Broderson site is expected to receive a maximum hydraulic loading of 3.1 gallons per day per square foot, or 0.8 MGD, of treated effluent during wet weather. The combined loading during wet weather is many times less than the infiltration capacity of the soil. The leach lines will be buried several feet deep, below any surface water flows. The project is also designed with storage ponds at the treatment facility (46 acre-feet of capacity, or approximately 15 million gallons) to provide the retention time anticipated for balancing disposal rates between spray disposal at Tonini and leachfield disposal at Broderson. For example, during times of inclement weather, effluent can be stored on site at Tonini until spraying or leachfield operations can resume.

Response to Comment A4-8

This comment expresses concern about effluent quality (nitrogen) and questions what method is used for the separate nitrogen removal that is referenced on Draft EIR page 3-57. The referenced comment is made with respect to Proposed Project 4 and the use of facultative pond effluent treatment. As noted in Draft EIR Section 7, Alternatives to the Proposed Project page 7-44, this process requires nitrogen removal and algae management for proper operation within the RWQCB standards for nitrogen. Further, the Carollo Engineers' Fine Screening Report observes that mixed facultative ponds generally do no fully nitrify the effluent and additional measures are needed to accomplish this. The report suggests the use of methanol as a carbon source to meet the nitrogen level requirements of the effluent. This method is employed in the Environmentally Superior Alternative, as identified in Draft EIR Section 7.4 and presented in that section's Table 7-7.

Response to Comment A4-9

This comment expresses a concern regarding incidental runoff from spray disposal. The preferred project description provides details on the sprayfield operations. Since only evapotranspiration would be used and only under controlled conditions and 100 foot setbacks from all drainages would occur, no significant impacts are expected.

Response to Comment A4-10

This comment stated that removing the existing septic tanks by excavation would result in potentially significant impacts. The comment suggests that the septic tanks be abandoned in place. Proposed Project 1, identified in the Draft EIR, which includes the STEP/STEG collection system, would require the removal of the existing septic tanks to install the new tanks only in those situations where there is not sufficient room to install a new tank. The environmental impact associated with this removal was evaluated in Section 5 of the Draft EIR. With the gravity collection system in Proposed Projects 2 through 4, identified in the Draft EIR, as well as the Preferred Project, the existing septic tanks could be abandoned in place.

Response to Comment A4-11

This comment expresses a desire for the inclusion of Low Impact Development (LID) Methodologies in the mitigation measures. The various elements of the project that produce new impervious surfaces include pump stations located outside of existing paved streets, access driveways to these facilities (such as at Broderson) and facilities at the treatment plant site. As part of the final design process

through the design/build process, the County intends to fully implement LID at all of the facilities associated with the project.

Coastal San Luis Resource Conservation District

545 Main Street, Suite B-1, Morro Bay, CA 93442 805-772-4391

January 29, 2009

Mr. Mark Hutchinson
Environmental Programs Manager
Department of Public Works, San Luis Obispo County
1050 Monterey Street, Room 207
San Luis Obispo, CA 93408

RE: Los Osos Wastewater Project (LOWWP) Draft Environment Impact Report

Dear Mr. Hutchinson:

The proposed Los Osos Wastewater Project is located within the boundaries of the Coastal San Luis Resource Conservation District (RCD), whose mission includes the conservation of water and soil resources, and the preservation of prime agricultural lands. The LOWWP draft EIR identifies environmental impacts to surface water and drainage; groundwater quality and water supply; and significant unavoidable impacts to agricultural resources.

The County and Staff are to be commended for the professional and open manner in which they have conducted the process of identifying and developing project alternatives. We appreciate the opportunity to comment on the draft EIR. A5-1

The RCD would have preferred that the wastewater treatment project be sited within or at least nearer to the Urban Reserve Line of Los Osos. However, we recognize that the County has made a good faith effort to provide the community with a project that is acceptable to them. The draft EIR has identified the proposed Project 4 as the environmentally superior alternative, and is the basis for our comments.

Water

The Los Osos groundwater basin is currently in overdraft and impacted by sea water intrusion. The draft EIR states that 35% of the effluent will be used to address sea water intrusion by disposal at the Broderson leachfield. The remaining effluent will be disposed of on the Tonini ranch sprayfields. Future use of the sprayfield effluent through return to the community and/or agricultural reuse was addressed.

To that end, the RCD strongly recommends that the effluent receive tertiary treatment, and not the secondary level as proposed. Tertiary treated effluent would improve the quality and perception of the product as well as its opportunity to be utilized for irrigation of agricultural fields, parks, playgrounds, street landscaping and common areas under the control of home owner associations and open space, and fire suppressant supply lines. As currently proposed (treatment to the secondary level), sprayfield effluent disposal alternatives are limited to options that do not reduce demand for potable water, nor address salt water intrusion concerns. A5-2

Loss of Agricultural Land and Mitigation

The proposed mitigation measure for the conversion of prime farmland to non-agricultural use would be the placement of farmland conservation easement on a minimum of 175 acres "within reasonable proximity to the project site." This easement acreage should be located within the Morro Bay drainage side of Los Osos Valley, preferably between the treatment plant facility and the Los Osos urban reserve line.

At the request of the RCD, the Natural Resources Conservation Service completed an analysis of the sprayfield soils and their effluent capacity, based on the information provided in the EIR Table 3-5. (See Attachment). The purpose of this analysis was to satisfy the RCD that the sprayfield application rates would not result in runoff. The analysis indicates the application rates stated in Table 3-5 are acceptable. The soils will be in a state of saturation, and runoff can become an issue during heavy rain storm events.

It is not apparent why the grass produced on the spray fields should be transported to a landfill for nutrient management. The effluent has the same nutrient content as that going to the Broderson leachfield to recharge groundwater. Agricultural use (page 7-64) suggests "…certain crops such as fodder and fiber crops, sod, and ornamentals, can be irrigated…" Alternatives such as composting on site or providing as green fodder for sale during March-November, a time period it would be in demand, should be pursued. A5-3

The farmland conversion impact analysis for Project 1 (page 5.11-7), states that, "For the Tonini parcel…the County would publicly acquire this entire parcel and maintain agricultural use under a long-term easement." It is important that the entire 650 acre Tonini Ranch be placed in a farmland easement for Projects 2, 3 and 4 as well, since the sprayfield is integral to all proposed projects. We request that this be clearly stated and included in the EIR, and that the 175 acre easement(s) mitigation measure will apply to land other than the Tonini Ranch.

Thank you again for the opportunity to comment. Please feel free to contact us should there be any further discussion or question.

Sincerely,

Neil Havlik

Neil Havlik, President
Board of Directors

Attachment: NRCS Comment on Soils and EIR of LOWWP, 3 pages

United States Department of Agriculture
NRCS Natural Resources Conservation Service

65 Main St., Suite 108
Templeton CA 93465
(805) 434-0396
FAX (805) 434-0284

January 29, 2009

Coastal San Luis Resource Conservation District

Subject: Comment on Soils and EIR of LOWWP

Soils of the Tonini Spray Fields are very limited for disposal of waste water by irrigation. While the entire field may be too steep for surface (flood) application of water, soil map units 120, 121 and 128 are not too steep for application by sprinkler. These three soil map units comprise 66% of the proposed fields. Application rates may need to be low because of slow and very slow permeability, and high runoff potential.

Please see the attached soil map and table for details on:

1. Proportion of each soil map unit
2. Soil permeability rates & classes
3. Total available water holding capacity
4. Runoff potential
5. Leaching potential
6. Ratings and reasons for limitations for disposal of waste water by irrigation.

Application Rate of Effluent and Potential for Runoff or Deep Percolation

I estimate that applying 3.0 acre-feet/acre/year in addition to average precipitation will meet the need of the crop. See Table entitled "Estimated Capacity of Soil to Receive Effluent at Tonini Spray Fields" for calculations. Additional irrigation will either run off the field or percolate below the root zone. Runoff may occur if the application of irrigation water exceeds the permeability of the soil. The Cropley soil has permeability of 0.06 to 0.2 inches/hour. The EIR seeks to prevent runoff from leaving the spray field by providing a tail-water recovery system at the bottom of the spray fields. Application rates may need to be proportionate to the precipitation and evapotranspiration as they change during the season. There is the least demand for irrigation in March and April, and the greatest demand in July. Excess irrigation applied at less than or equal to the permeability rate of the soil will percolate deeper than the root zone. Deep percolation is the downward movement of water at the bottom of the soil profile which represents a loss of water from the root zone. (Glossary, Soil Science Society of America) Applying 4.8 acre-feet/acre/year, as the EIR proposes, at or below the permeability rate of the soil may result in 1.8 acre-feet/acre/year of deep percolation. See Table entitled "Application of 4.8 acre-feet/acre/year of Effluent by Equal Portions each Month" for calculations. This may not affect the ground water because the ground water and the effluent have similar TDS, 602 and 620 mg/l respectively. There may be additions of nitrogen to the groundwater.

A5-4

Salt Accumulation

Salt should not accumulate in the root zone under the management given in the EIR. These soils require a little excess irrigation (leaching requirement) to remove accumulation of salt from the root zone. The EIR says the effluent has 620 mg/l of TDS, which is approximately equivalent to an EC (electrical conductivity) of 0.9 dS/m. The EIR does not specify which grass will be grown on the Tonini spray fields, but perennial ryegrass would be appropriate. It is moderately tolerate of salinity

A5-5

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NRCS Natural Resources Conservation Service

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according to the NRCS Veg Guide. Other plants with moderate tolerance of salinity, tolerate a soil EC of at least 4.0 dS/m without reduction in yield. Using these figures the leaching requirement is 6 % excess irrigation. (Hansen and Gratten, Agricultural Salinity and Drainage: A User's Handbook, University of California, Davis, February 1992, pp. 41-43) I estimate that application of 3.0 acre-feet/acre/year added to the average precipitation from March through November will meet the need of the crop. Six percent of this, or an additional 0.18 acre-feet/acre/year, would prevent the accumulation of salt in the root zone. Average precipitation from December through January of 13.4 inches will fill the 8.0 water holding capacity of the root zone with an excess of 5.4 inches. These 5.4 inches exceeds the leaching requirement. The rate given in the EIR of 4.8 acre-feet/acre/year surpasses the crop need and leaching requirement.

A5-5 CONT

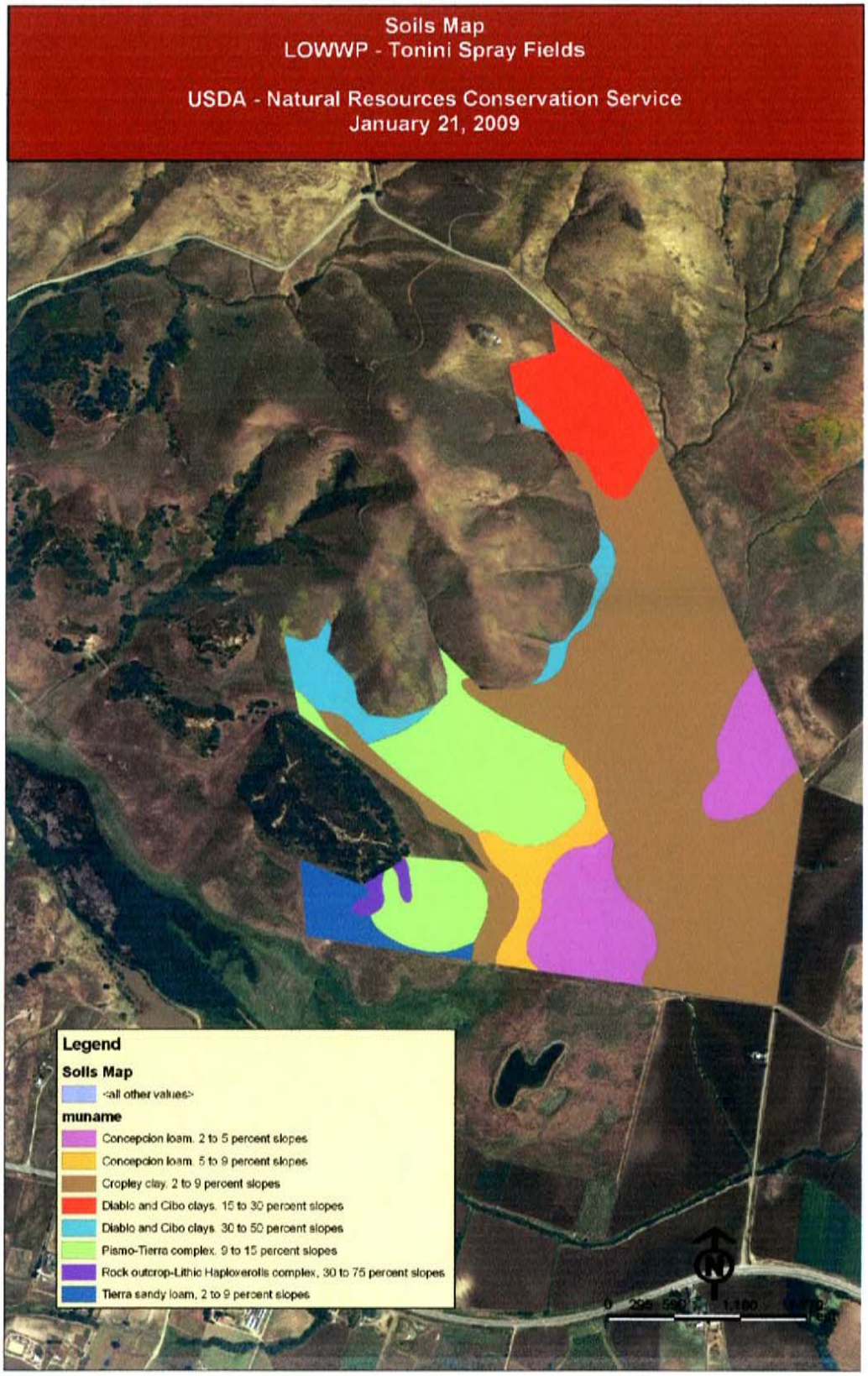
Capacity of Tonini Spray Fields to Receive Effluent

For application of effluent to only meet the need of the crop at a rate of 3.0 acre-feet/acre/year, the 180 acre field could receive 534 acre-feet of effluent. For application at the rate proposed in the EIR of 4.8 acre-feet/acre/year, the 180 acre field could receive 858 acre-feet of effluent.

A5-6

Thanks for asking.

Ken Oster
Area Resource Soil Scientist


Soils Map
LOWWP - Tonini Spray Fields
USDA - Natural Resources Conservation Service
January 21, 2009
Legend
Soils Map
<all other values>
muname
Concepcion loam, 2 to 5 percent slopes
Concepcion loam, 5 to 9 percent slopes
Cropley clay, 2 to 9 percent slopes
Diablo and Cibo clays, 15 to 30 percent slopes
Diablo and Cibo clays, 30 to 50 percent slopes
Pismo-Tierra complex, 9 to 15 percent slopes
Rock outcrop-Lithic Haploxerolls complex, 30 to 75 percent slopes
Tierra sandy loam, 2 to 9 percent slopes
N

Soil Properties and Ratings for LOWWP - Tonini Spray Fields

Map Unit Symbol	Soil	Percent of Map Unit	Acres	% of Spray Fields	Permeability (saturated hydraulic conductivity) of Slowest Layer (1) inches/hour	Class	Total Available Water Holding Capacity (1) inches	Runoff Potential (2)	Leaching Potential (2)	Disposal of Waste Water by Irrigation (1) Rating	Reasons
120	Concepcion loam	85	38.6	12	0.0015 - 0.06	Very slow	7.6	High	Very low	Very limited	Slow water movement, too acid, Too steep for surface application
121	Conception loam	85	12.8	4	0.0015 - 0.06	Very slow	7.6	High	Very low	Very limited	Slow water movement, Too steep for surface application, Too acid, Too steep for sprinkler application
128	Cropley clay	85	154.1	50	0.06 - 0.2	Slow	8.0	High	Very low	Very limited	Slow water movement, Too steep for surface application
131	Diablo clay	45	24.9	8	0.06 - 0.2	Slow	9.8	High	Very low	Very limited	Low adsorption, Too steep for surface application, Too steep for sprinkler application, Slow water movement
131	Cibo clay	45			0.06 - 0.2	Slow	6.2	High	Very low	Very limited	Too steep for surface application, Too steep for sprinkler application, Slow water movement, Depth to bedrock
132	Diablo clay	45	14.4	5	0.06 - 0.2	Slow	9.8	High	Very low	Very limited	Low adsorption, Too steep for surface application, Too steep for sprinkler application, Slow water movement
132	Cibo clay	45			0.06 - 0.2	Slow	6.2	High	Very low	Very limited	Too steep for surface application, Too steep for sprinkler application, Slow water movement, Depth to bedrock
191	Pismo loamy sand	40	52.6	17	6 - 20	Rapid	1.3	High	Very low	Very limited	Droughty, Too steep for surface application, Depth to bedrock, Filtering capacity, Too steep for sprinkler application
191	Tierra sandy loam	30			0.0015 - 0.06	Very slow	5.2	High	Very low	Very limited	Slow water movement, Too steep for surface application, Too steep for sprinkler application, Too acid, Droughty
195	Rock outcrop	55	2.4	1		No data	No data	High	Very low	Not rated	
195	Lithic Haploxerolls	25				No data	No data	High	Very low	Not rated	
216	Tierra sandy loam	85	9.2	3	0.0015 - 0.06	Very slow	5.2	High	Very low	Very limited	Slow water movement, Too steep for surface application, Too acid, Droughty

(1) Soil Survey of San Luis Obispo County, California, Coastal Part, digital version 3, 12/14/2006
(2) NRCS, Windows Pesticide Screening Tool, ver. 3.1

Estimated Capacity of Soil to Receive Effluent at Tonini Spray Fields

Month	Water Stored in Soil at Start of Month (4)	Precipitation (2)	Application of Effluent to Fill Soil from 0 to 60 inches (3) (5)	ET_0 (1)
	(inches)			
March	8.0	3.1	0.3	3.41
April	8.0	1.9	2.9	4.80
May	8.0	0.4	5.2	5.58
June	8.0	0.2	6.1	6.30
July	8.0	0.0	6.5	6.51
August	8.0	0.0	6.2	6.20
September	8.0	0.1	4.7	4.80
October	8.0	0.7	3.0	3.72
November	8.0	1.7	0.7	2.40
Total (inches)		8.1	35.6	43.7
Total (acre-feet)			3.0	
Total acre-feet for 180 acres			534.3	
(1) CIMIS ET_0 Map				
(2) Long range average from Soil Survey of SLO County, Coastal Part				
(3) Applied at =< 0.06 to 0.2 inches/hour when saturated to avoid runoff				
(4) Capacity of Cropley soil (inches)	8.0			
(5) = Capacity of soil - (Stored in Soil + Precipitation - ET_0)				

Application of 4.8 acre-feet/acre/year of Effluent by Equal Portions each Month

Month	Water Stored in Soil at Start of Month (4)	Precipitation (2)	Application of Effluent (3)	ET_0 (1)	Deep Percolation by End of Month (5)
	(inches)				
March	8.0	3.1	6.36	3.41	6.1
April	8.0	1.9	6.36	4.80	3.5
May	8.0	0.4	6.36	5.58	1.2
June	8.0	0.2	6.36	6.30	0.3
July	8.0	0.0	6.36	6.51	0.0
August	7.6	0.0	6.36	6.20	0.0
September	7.8	0.1	6.36	4.80	1.5
October	8.0	0.7	6.36	3.72	3.3
November	8.0	1.7	6.36	2.40	5.7
Total (inches)		8.1	57.2	43.7	21.4
Total (acre-feet)			4.8		1.8
Total acre-feet for 180 acres			858.6		
(1) CIMIS ET_0 Map					
(2) Long range average from Soil Survey of SLO County, Coastal Part					
(3) Applied at =< 0.06 to 0.2 inches/hour when saturated to avoid runoff					
(4) Capacity of Cropley soil (inches)	8.0				
(5) = Stored at Start of Month + Precipitation + Effluent Applied - ET0 - Capacity of Soil					

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Coastal San Luis Resource Conservation District, Neil Havlik, January 29, 2009 (Letter A5)

Response to Comment A5-1

This comment expresses a desire for the wastewater treatment project to be sited within or near the Urban Reserve Line of Los Osos. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A5-2

This comment expresses a concern regarding seawater intrusion and recommends the use of tertiary treatment. See Topical Response 4, Tertiary Treatment, regarding agricultural reuse and associated costs.

Response to Comment A5-3

The comment makes four points. It states that the easement acreage for conversion of prime farmland to non-agricultural use should be located within the Morro Bay drainage side of Los Osos Valley, preferably between the treatment facility and the Los Osos Urban Reserve Line. The second point is that runoff from the sprayfields can become an issue during heavy rainfall events. The third point recommends an alternative to transporting grass produced on the sprayfields to a landfill for nutrient management. The fourth point is that the Draft EIR needs to clearly state that the entire Tonini parcel will be publicly acquired and placed under a long-term agricultural easement, and that the 175-acre easement(s) will apply to areas other than the Tonini parcel.

Regarding the first point, Mitigation Measure 5.11a-1 on page 5.11-39 of the Expanded Agricultural Resources Section offers general guidelines for where easement acreage will be purchased, and indicates the parcel(s) should be "within reasonable proximity" to the site. Given changing market conditions for agricultural properties and availability of willing sellers it is not possible to be more specific as to where easement acreage will be purchased.

Regarding the second point, the Draft EIR Project Description (page 3-43) indicates that the sprayfields will not be used during the winter months, the most likely period when heavy rainfall would occur. Appendix Q.3, Preferred Project Description, provides further detail on the restriction of spraying base on weather conditions.

Regarding the third point, on Draft EIR page 3-44 in the Project Description, the reason for not leaving grass on the sprayfields is provided, which in summary, is to comply with a state regulatory requirement (California Code of Regulations, Title 22) for tertiary treated wastewater.

Regarding the fourth point, the Local Coastal Plan requires that all portions of the site not used for the project be placed under an agricultural easement. Therefore, the portion of the site outside the sprayfield and outside the treatment facilities will be under easement protection. The easements required for mitigation would be on property equal to or better than the land use for the project and would occur on property other than the Tonini Site.

Response to Comment A5-4

This comment states that there may be addition of nitrogen to the groundwater as a result of the application rate of effluent runoff or deep percolation. Since the release of the Draft EIR the Tonini sprayfield disposal component has been redesigned (see Appendix Q) to be evapotranspiration disposal only and slow percolation disposal has been removed. Effluent application will be conducted at seasonal rates that consider effective rainfall, evapotranspiration, and crop water demands.

Response to Comment A5-5

This comment expresses a concern regarding the application rate identified in the Draft EIR. See Response to Comment A5-4.

Response to Comment A5-6

This comment states that for effluent to meet only the need of the crop at a rate of 3.0 acre-feet/acre/year, the 180-acre field could receive 534 acre-feet of effluent. For application at the rate proposed in the Draft EIR of 4.8 acre-feet/acre/year, the 180-acre field could receive 858 acre-feet of effluent. Because there are no comments on the contents of the Draft EIR, no further response is required.

COUNTY OF SAN LUIS OBISPO
Department of Agriculture/Measurement Standards

2156 SIERRA WAY, SUITE A, SAN LUIS OBISPO, CALIFORNIA 93401-4556
ROBERT F. LILLEY (805) 781-5910
AGRICULTURAL COMMISSIONER/SEALER FAX: (805) 781-1035
AgCommSLO@co.slo.ca.us

DATE: **January 29, 2009**

TO: **Mark Hutchinson, Project Manager**

FROM: **Lynda L. Auchinachie, Agriculture Department**

SUBJECT: **Los Osos Wastewater Project Draft Environmental Impact Report**

Thank you for the opportunity to review the Draft Environmental Impact Report (DEIR). The following comments are based on current departmental policy to conserve agriculture resources and to provide for public health, safety and welfare while mitigating negative impacts of development to agriculture.

Agricultural Resources
The Agriculture Department generally agrees with the DEIR conclusion that the impacts to identified agricultural resources is a significant and unavoidable impact for all four proposed projects and that mitigation for the loss of agricultural resources is appropriate. However, based on the information provided in the DEIR it is not clear that the least amount of prime soil possible would be converted or there is no other feasible site that is not under a Williamson Act contract. The following issues should be addressed to clarify that the project has been designed to avoid/minimize impacts to prime soil, be consistent with land use policies protecting agricultural resources, and meet the Williamson Act contract termination requirements of Government Code Section 51292 (a)(b).

A6-1

- The total acreage of converted agricultural land is not clear for each proposed project. For example, the expanded land use and planning analysis section (Appendix C) indicates that the combined project effects for proposed project 4 would encompass approximately 207 acres. Figure 2-8 of the project description data (Appendix B) shows that the project is all contained within the 175 acre sprayfield area identified for each proposed project. A chart identifying specific project component related impacts to agricultural resources would be helpful to better understand direct and indirect impacts to both prime and non-prime soil, particularly for the Branin, Giacomazzi and Cemetery properties that consist primarily of non-prime soil (Appendix M). Additionally, this information is important to ensure appropriate mitigation.

- The DEIR indicates that it is possible to locate the sprayfield on the parcel south of the Tonini site that consists of both prime and non-prime soils. The DEIR also indicates that locating the sprayfield on this property would result in the direct impact to approximately 106 acres of prime soil and the indirect impact to an additional 75 acres of prime soil, for a total of 181 acres. The DEIR did not include a site plan for the

A6-2

specific location of the sprayfield, however, it appears that the impacts to prime soil may be overstated as most if not all of the 75 acres identified as indirectly impacted could continue in agricultural production based on acreage, resources, and land use compatibility. Therefore, the area suitable for continued agricultural production should not be considered impacted by the sprayfield or included as part of the impacted prime soil acreage total. The continuation of agricultural uses is also proposed on the Tonini site for areas not directly impacted by the project.

A6-2 CONT

It appears the property south of Tonini is not under Williamson Act contract and could be a feasible alternative location for a sprayfield that results in fewer impacts to prime soil compared to the Tonini site. What would the total loss of prime soil be for each proposed project if the required sprayfield was located on the property south of Tonini?

- The DEIR identifies that a 175 acre sprayfield is required to dispose of 842 AFY of effluent for each of the four proposed projects. This sprayfield is the project component that would result in the largest conversion of prime soil. It appears the area identified for the sprayfield generally consists of prime soil with a very slow permeability rate. The DEIR did not include detailed evaluation of alternative sites with non-prime soil and/or greater permeability for sprayfield use (Appendix D- Cleath memos). Such sites may reduce the acreage necessary for a sprayfield. A thorough evaluation of alternative sprayfield locations should be included to determine if there could be a reduction in the amount of prime soil converted. The Natural Resources Conservation Service (NRCS) saturated hydraulic conductivity (Ksat) rating, available on the NRCS Web Soil Survey site, may be useful in evaluating alternative locations for a sprayfield such as a combination of the Cemetery, Andre and Robbins sites.

A6-3

- The Broderson leachfield will accommodate approximately 448 AFY of effluent using only 8 acres of an 81 acre site with several constraints. The DEIR did not identify other potential leachfield locations within the dune sands and/or other areas that have been evaluated for the current proposal. Is an additional leachfield possible? Could such a leachfield reduce or eliminate the acreage necessary for the proposed sprayfield thus reducing conversion of agricultural land including prime soil?

A6-4

- Proposed project 4 has been identified as the environmentally superior alternative for a variety of reasons including the conversion of only one agricultural parcel to a public purpose has the lowest loss of potential agricultural revenue to the local economy. This analysis/conclusion is difficult to understand as there is not a resource justification that is typically associated with determining an environmentally superior alternative. Perhaps a more appropriate threshold for determining an environmentally superior alternative would be based on agricultural resources/land use policies. An example could be the project that would result in the least impacts to agricultural land, particularly prime soil as required by coastal land use policies.

A6-5

If you have any question, I can be reached at 781.5914.

County of San Luis Obispo Department of Agriculture/Measurement Standards, Lynda L. Auchinachie, January 29, 2009 (Letter A6)

Response to Comment A6-1

The comment makes two points. One point is that the Draft EIR needs to clarify that the project is designed to avoid or minimize impacts to prime soils. The second point is that a chart is needed to display specific project component-related impacts to better understand the impacts to prime soils for the agriculturally zoned parcels.

Regarding both points, as stated on page 5.11-25 of the Expanded Agricultural Resources Analysis, analysis of impacts to agricultural resources follow guidance from the California Coastal Act, and involve an analysis of impacts to prime agricultural lands. Prime agricultural lands consider a number of factors, one of which is presence of prime soils. California Coastal Commission Guidelines for the definition of prime agriculture lands are found on page 5.11-12 of the Expanded Agricultural Resources Analysis. Therefore, an analysis of impacts to prime soils is not necessary.

Response to Comment A6-2

This comment expresses states that the area suitable for continued agricultural production should not be considered impacted by the sprayfield. The property directly south of the Tonini Ranch consists of approximately 268 acres, crossed by Warden Creek and by three tributaries of Warden Creek. Approximately 100 acres of the property is also within the 100-year floodplain and is known to be periodically innundated (corresponding closely to the area of prime soils). Given that neither the treatment plant nor the sprayfields could be located within the floodplain, the area available for project use is limited to approximately 168 acres. Assuming the site has the same percolation characteristics as the neighboring Tonini site (that is, essentially no percolation) then approximately 250 acres would be needed for the project (20 for the treatment plant and 230 for the sprayfield). Further complicating the site are the necessary setbacks from the coastal streams, and the high visibility of the site to travelers on Los Osos Valley Road. Together with the lack of available space, it becomes clear that the property to the south of Tonini could not accommodate the project.

Response to Comment A6-3

This comment expresses a desire for the inclusion of an evaluation of alternative sprayfield locations. Detailed geotechnical analysis of the Tonini site shows that deep percolation is not expected to occur; therefore, the sprayfield will be dependent on evapotranspiration only and will require approximately 230 acres. Because most of the Los Osos Valley has similar geology and soils to the Tonini site, it is expected that a similar area would be needed regardless of the location within the valley. The Giacomazzi/Cemetery/Branin sites contain more amenable soils, but combined do not provide the necessary acreage once setbacks from sensitive resources (streams and cultural sites) are considered. Other larger parcels located to the west, south, and east of the Tonini site along the valley floor site present additional problems, such as shallow groundwater and wet soils, large areas subject to flooding, large areas containing high-value wetlands, and larger areas of prime soils. In addition,

other areas of the valley would require the purchase of multiple ownerships, impacting multiple agricultural operations and requiring the removal of multiple residences.

Response to Comment A6-4

This comment expresses a concern regarding alternatives to the Broderson leachfield. There are other potential leachfield sites within the community, as evidenced by the project proposed in 2001 by the LOCSD. However, these require the use of multiple street rights-of-way to install leach lines, leading to ongoing high maintenance costs and concerns about the long-term effects of the leachfields in the urban area. These sites, together with Broderson, could not accommodate the entire expected flows, leaving a substantial volume (over one-third) of the effluent needing disposal. A key requirement of the project is redundancy, including provision for an alternate disposal area outside of the urban area in the unlikely event in-town disposal is not usable in either the long- or short-term. Alternate in-town disposal sites would not meet this redundancy goal, in addition to being unable to accommodate all of the flows.

Response to Comment A6-5

The comment raises a question about why Proposed Project 4 was identified as the environmentally superior alternative. The comment further states that the rationale for selecting Proposed Project 4 does not include a resource justification.

On page 7-68 of the Draft EIR, numerous reasons are given for selection of Proposed Project 4 as the environmentally superior alternative. Some of the reasons that Proposed Project 4 was chosen as the environmentally superior alternative are because it minimizes impacts to public health and safety, results in the greatest reduction in greenhouse gas emissions and energy demand, and it reduces potential impacts to biological and cultural resources, and prime agricultural land. Appendix Q provides details on the Preferred Project which contains refinements that further reduce environmental impacts.

State of California - The Resources Agency
DEPARTMENT OF FISH AND GAME
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Central Region
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January 30, 2009

Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Department of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

Subject: Los Osos Wastewater Project
Draft Environmental Impact Report
State Clearinghouse No. 2007121034

Dear Mr. Hutchinson:

The Department of Fish and Game has reviewed the Draft Environmental Impact Report (DEIR) received by the Department on December 22, 2008, for the County's Los Osos Wastewater Project (LOWWP). The Project consists of construction and operation of a collection and conveyance system; a wastewater treatment process and site; and effluent disposal process and locations, of differing technologies in different configurations. In addition, the DEIR describes some Project components which are identified in the alternatives section which would further the Project's goals and objectives.

The Department supports the construction of a Wastewater Treatment Facility for the community of Los Osos; we believe that the Project is necessary to alleviate groundwater contamination of the aquifer underlying the community and to curtail runoff of pollutants into Morro Bay, including the Morro Bay Wildlife Area, managed by the Department. We do not recommend one combination of required elements of the proposed Project over any other; however, we do have comments on content, as well as procedural issues, as laid out in the document. Our intent in submitting this detailed analysis and comments for your consideration is to continue our constructive support of a robust planning and permitting process, hopefully resulting in the best possible Project.

In general, the DEIR appears to defer surveys and identification of specific mitigation to a later date, which would not be consistent with the intent of the California Environmental Quality Act (CEQA) to disclose to the public and to decision makers, the potential impacts and feasible mitigation measures associated with the Project; nor does it allow the County to determine which potentially significant effects would be mitigated to a level of less than significant. Additionally, the DEIR does not completely characterize the regulatory framework or aspects of the permitting process for the proposed Project. This letter outlines the Department's authorities and provides comments regarding the DEIR, including whether the document has adequately characterized the type, extent and significance of effects; whether proposed mitigation measures would reduce potentially significant effects to less than significant; and if not, what additional measures would be required to do so. Additionally, we have attempted to clarify what subsequent permitting would be needed from the Department and the optimal manner to incorporate those requirements into this process.

CEQA Authority: The Department is a Trustee Agency with the responsibility under CEQA for commenting on projects that could impact botanical and wildlife resources. Pursuant to Fish and Game Code Section 1802, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. As a Trustee Agency for fish and wildlife resources, the Department is responsible for providing, as available, biological expertise to review and comment on environmental documents and impacts arising from project activities, as those terms are used under CEQA. In addition, for those projects which require a subsequent discretionary permit from the Department, we are a Responsible Agency.

Streambed Alteration Notification: Alterations to Los Osos Creek, Warden Creek, or any other lake or streambed, which would be incurred to implement the selected Project, would require notification, pursuant to Section 1600 et seq. of the Fish and Game Code. This includes crossings anticipated to be constructed via micro-tunneling and horizontal directional drilling (HDD) techniques. The Department would likely require a Streambed Alteration Agreement (SAA) prior to the applicant's alteration of these streambeds. Please be advised that issuance of an SAA is considered to be a project under CEQA, and as such, the Department will want to rely on the County's CEQA document to make findings. For additional information on notification requirements, please contact our staff in the Lake and Streambed Alteration Program at (559) 243-4593.

Please note that identification of a creek as a "blue-line" on United States Geological Survey (USGS) topographical maps is not the only determining factor as to whether a creek would come under the jurisdiction of Fish and Game Code Section 1600 et seq. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will divert, obstruct, or change the natural flow, or the bed, channel or bank of any river, stream, or lake, use material from a streambed, result in the disposal or deposition of debris, waste, or other material where it can pass into any river, stream, or lake. The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

The Notification must include a plan to ensure no net loss of wetland and riparian habitat values and acreage. Fish and Game Commission policy states that for every acre of wetland lost, no less than 1 acre of wetland must be created from non-wetland habitat. The policy further describes that the compensatory mitigation must at least duplicate the fish and wildlife habitat values that are lost to project implementation. Mitigation sites should include buffers of sufficient width to eliminate potential disturbance from noise, human activity, feral animal intrusion, and any other potential sources of disturbance. In-kind, on-site mitigation is generally the most acceptable. The Department strongly prefers mitigation which would both expand wetland acreage and enhance wetland habitat values, while avoiding impacts to other classes of sensitive resources. We would work with the County to evaluate potential sites for such mitigation.

California Endangered Species Act (CESA) Compliance: The Department has regulatory authority over projects that could result in the "take" of any species listed by the State as threatened or endangered, pursuant to Fish and Game Code Section 2081. If the Project could result in the "take" of any species listed as threatened or endangered under CESA, the Department may need to issue an Incidental Take Permit (ITP) for the Project. CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (Sections 21001{c}, 21083, Guidelines Sections 15380, 15064, 15065). Significant impacts of the project must be avoided or mitigated to less than significant levels; CEQA does allow the Lead Agency to make and support a Statement of Overriding Considerations (SOC) for significant and unmitigable impacts.

However, the CEQA Lead Agency's SOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code Section 2081, under which impacts to State-listed threatened and endangered species must be "minimized and fully mitigated". In other words, a SOC cannot apply to impacts to State-listed threatened and endangered species. Compliance with CESA does not automatically occur based on local agency project approvals or CEQA compliance; consultation with the Department is warranted to ensure that a project is identified which will meet CESA's permit issuance criteria, and so that project implementation does not result in unauthorized "take" of a State-listed species.

Incidental "take" authority is required prior to engaging in "take" of any plant or animal species listed under CESA. Plants listed as threatened or endangered under CESA cannot be addressed by methods described in the Native Plant Protection Act. No direct or indirect disturbance, including translocation, may legally occur to State-listed species prior to the applicant obtaining incidental "take" authority in the form of an ITP or equivalent.

This DEIR has incorrectly characterized consultation with the wildlife agencies (both State and Federal) as mitigation which would compensate for impacts to State- and Federally listed species. Additionally, the DEIR has also incorrectly characterized the process for obtaining "take" authorization for species listed under CESA. That authorization can be in the form of an ITP issued pursuant to Section 2081 of CESA, by the Department; or alternatively, we may be able to determine that a Federal biological opinion and Incidental Take Statement (ITS) or ITP issued by the United States Fish and Wildlife Service (Service) is consistent with CESA, pursuant to Section 2080.1, in which case no additional authorization would be needed. If we determine that the requirements of the Federal ITS or ITP do not meet our needs under CESA, the County will need to apply for a permit issued pursuant to Section 2081. The application process is found on the Department's webpage at http://www.dfg.ca.gov/habcon/cesa/. A7-1

There are several potential inconsistencies between the State and federal process which would need to be addressed in order to use a Federal ITP or ITS to satisfy CESA. All impacts to State-listed species must be "minimized" and "fully mitigated", and measures to minimize and fully mitigate would have to be included in the ITP or ITS in order for the Department to find it consistent. The species for which the County may wish "take" authorization potentially includes State-listed plant species, which are not typically addressed under a Federal ITP or ITS. Additionally, the Department will require financial assurances to guarantee that all measures

which are identified as mitigating the impacts of the "take" would be implemented. Finally, fully protected species, for which we would not allow any "take," would have to be treated as such in any Federal ITP or ITS in order to be consistent with those sections of the Fish and Game Code.

A7-1 CONT

The DEIR has proposed to defer the identification of impacts to listed species until "pre-construction surveys" are completed; that is inappropriate and inconsistent with both CESA and CEQA. Additionally, the DEIR proposes to leave the identification of mitigation measures to the Department, to be determined at a later date, after the Project has already been approved, an approach which is not recommended for either the Department or the Project proponent. We prefer to address this issue up front and can assist you with identification of what level of information, such as appropriate surveys, impact/"take" assessment, and proposed conservation areas to mitigate for losses incurred by the Project, would be needed to support an application for an ITP. Once the appropriate surveys have been completed, we are available to work with the County and the Service to identify measures which could be included in a Federal ITP or ITS; or alternatively, in an application in support of a Section 2081 permit, which would meet CESA permit issuance criteria. Those measures should be identified prior to adoption of the final Environmental Impact Report (EIR), and made conditions of Project approval. *This sequence is important to preparing a sound Section 2081 permit, because issuance of a permit is considered to be a "project" under CEQA. Thus, the Department will need to make CEQA findings for our permit issuance; we will want to utilize the County's CEQA document to make CEQA findings, and our findings will need to be supported by information in the CEQA document.*

A7-2

Fully Protected Species: The Fish and Game Code identifies several categories of species which are "fully protected", that is, no "take" of these species is authorized, except for necessary scientific research including efforts to recover species. Please note that "scientific research" does not include any actions taken as part of specified mitigation for a project, as defined in Section 21065 of the Public Resources Code.

Please be advised that Morro Bay kangaroo rat is designated as fully protected under Fish and Game Code Section 4700; and American peregrine falcon, brown pelican, California black rail, and white-tailed kite are designated as fully protected under Fish and Game Code Section 3511. All these species have the potential to occur on the proposed Project site, and the County will want to work with the Department to identify measures which would be implemented to preclude "take" from occurring. We recommend that such measures be identified prior to certification of the EIR, be required as Project conditions, and included in a Memorandum of Understanding between the County and the Department.

A7-3

Clarification of Other Authorities: The DEIR incorrectly identifies the Department in section 3.4.2 as having authority over Environmentally Sensitive Habitat Area (ESHA), a designation of the California Coastal Act. The California Coastal Commission has responsibility for implementation of this act and delegates permitting authority to the County via a certified Local Coastal Plan. Additionally, the DEIR lacks consistency between the text regarding the Coastal Zone Land Use Ordinance regarding Terrestrial Habitat Protection and Exhibit 5.5-3, which depicts ESHA lands.

A7-4

Also in section 3.4.2, the DEIR incorrectly characterizes the distinction between species listed as threatened or endangered under CESA, those which are fully protected under other sections of the Fish and Game Code, and those species which are identified as Species of Special Concern, as well as the Department's authorities in regard to those classes of resources. A7-4 CONT

Biological Surveys: This document relies heavily on information gathered for previous projects, none of which addresses the Cemetary, Giacomazzi, Branin, or Tonini sites, or proposed pipelines to access these sites. Appendix G mentions six days spent in the field, in April and May of 2008, for the purposes of "habitat assessment", the usefulness of which is questionable. The Department regards the use of a habitat assessment for impact assessment as predictive in nature and speculative; a habitat assessment is merely a tool to determine the need for subsequent surveys. The surveys themselves are intended to determine not only presence/absence, but also abundance, species distribution, and other information which is useful in the identification of ways in which impacts to significant resources could be avoided or minimized. We do not consider the information provided adequate for impact assessment for the proposed project sites nor does it provide information which could guide project siting alternatives. We cannot, therefore, concur that all potential significant Project impacts have been identified or will be mitigated to a level of less than significant. A7-5

Surveys for both plants and animals will need to be completed to adequately determine how this Project would impact sensitive resources, the significance of those effects, and to better identify measures which could serve to avoid, minimize, and otherwise fully mitigate for Project impacts. Conducting pre-construction surveys, as proposed, does not allow for timely identification of Project impacts and mitigation measures, and would not meet the intent of CEQA to address Project impacts in a fully transparent fashion. A7-6

Botanical surveys should follow guidelines developed by the Department (DFG, 2000, available on line at http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/guideplt.pdf) and the Service (USFWS, 2000, available on line at http://www.fws.gov/ventura/sppinfo/protocols/botanicalinventories.pdf). Botanical surveys should cover the entire property and should be timed appropriately to detect all species which may occur on the property before impact analysis occurs. Use of reference sites is recommended for species which are known to occur in the vicinity or which otherwise have a high potential of occurring on-site. Of particular note is that recommended protocols require a floristic survey of the Project sites be conducted; we do not recommend focused surveys which target only specific plants, as suggested in the DEIR. We can, in coordination with the Service, provide specific advice to the County as to the level of surveys, and suggested protocols, for listed and other sensitive animal species. A7-7

The Department submits the following additional comments on specific biological resources and issues discussed in the DEIR:

Sensitive Natural Communities: The DEIR lacks a meaningful discussion of impacts to sensitive natural communities, including those which would be considered as ESHA under the Coastal Act. Natural communities which would be considered as sensitive by the Department include (but are not limited to) central maritime chaparral; coastal dune scrub; wetlands, A7-8

including woody riparian habitat and freshwater emergent wetlands; additionally, there are significant non-native grasslands which could be affected by the proposed project which provide foraging habitat for a number of sensitive species including American badger, burrowing owl, and various raptors, including the fully protected white-tailed kite. There are scattered references to impacts to sensitive natural communities as being addressed in the section on Impact 5.5-F, which we were unable to locate in the text. A7-8 CONT

Central maritime chaparral, dominated by the Federally threatened Morro manzanita *(Arctostaphylos morroensis)* is considered a rare natural community by the Natural Diversity Database, and as such, impacts to this resource should be addressed. It is mentioned in the Biological Assessment, but not in the DEIR; there is no impact assessment and no proposed mitigation, except that which are specific to individuals of Morro manzanita. A7-9

Freshwater emergent wetland has the potential to be impacted by this Project, as do various other wetland and riparian communities. Please be advised that these wetland features are considered to be sensitive and regulated under the Coastal Act. The text (and mapping) should be amended to address State Regulated Wetlands, in addition to those which the DEIR refers to as Federally Protected Wetlands, but which are more appropriately called Federally Regulated Wetlands, and which would be a sub-set of the State wetlands. Additionally, mitigation measure 5.5-C should be expanded to address those State wetlands which would be impacted by the Project. A7-10

Morro Bay Kangaroo Rat: This species (*Dipodomys heermanni morroensis*) is listed by the State of California as endangered, in addition to its Federal status as endangered. Additionally, as noted above, it is fully protected. The species is extremely imperiled, and we would not approve of a mitigation strategy, as outlined in the DEIR in mitigation measure 5.5-A5, which consists of trapping the sites, and retention of trapped individuals "for consideration of captive breeding". As a fully protected species, trapping, or any other form of "take," is not permitted.

Furthermore, this species is so endangered that recovery efforts have had very strict protocols, under very close guidance by the Recovery Team of experts convened for that purpose. There is currently no captive breeding program established, no funds for supporting such an effort, and thus no place to "retain" captured individuals without an immense level of preparation. Any decision to trap for this species is not taken lightly, and the decision matrix for what to do with any captured individuals is a subject which the Recovery Team will need to address, far in advance of that moment when one may be caught in a trap. A7-11

We would not agree with the DEIR's assertion that impacts to this species are less than significant, even after implementation of the proposed mitigation measures; in fact, we view the proposed mitigation measures to increase the potential impacts to the species.

Indian Knob Mountainbalm: This species *(Eriodictyon altissimum)* is listed by the State of California as endangered, in addition to its Federal status as endangered. This species is also extremely rare, throughout its range as well as in the vicinity of the project site. We do not consider the mitigation proposed in the DEIR mitigation measure 5.5-A13 (deferred surveys, A7-12

avoidance only if possible, "transplantation and relocation of salvaged specimens" and other measures to be determined through future wildlife agency consultation) to be adequate to address this species. Additionally, the DEIR proposes no plan to address this species (and other listed plant species), no success criteria to be met, and no contingency if the proposed translocations are not successful; the only requirement offered by the DEIR is to report on the number of plants relocated, the locations, and the number of dead and damaged, along with any other problems encountered in implementing mitigation measures.

This is a woody chaparral species, and salvage and relocation is not a feasible mitigation measure for this species. In the absence of specific surveys, and without specific information regarding the abundance and distribution of this species on the Project site, our recommendation would be to avoid any impacts to this species, including establishing setbacks from any leach fields which would be sufficient to preclude damage to or decline of plants found on the project site. A7-12 CONT

We do not agree with the DEIR's assertion that impacts to the Indian Knob mountainbalm (or other listed plant species) have been fully mitigated, nor would the proposed mitigations mitigate potential impacts to a level of less than significant; and additionally, these measures would not meet issuance criteria for an ITP under CESA.

Morro Bay Blue Butterfly: This is a species of limited distribution, associated with a species of bush lupine *(Lupinus chamissonis)* in the dune scrub community. The mitigation measure 5.5-A10 in the DEIR recommends multiple capture and transport of adults during the adult flight season. We recommend that you confer with experts on this species, as there may be a much simpler and cost effective method to mitigate impacts to this species that would focus on avoidance where feasible, and where not, replanting of the host species of lupine, and perhaps relocating parts of the host lupine which contain the eggs or pupae. A7-13

Nesting Birds and Nesting Raptors: The DEIR indicates in mitigation measures 5.5-A11 and 5.5-A12 that grading, vegetation removal, and other construction shall be preferentially scheduled during the non-nesting season for all birds. We recommend that season be designated as February 1 through August 31 for all nesting birds, including raptors. In addition, mitigation measures 5.5-A11 and 5.5-A12 both stipulate that if work is planned during the nesting season, a pre-construction survey shall be done, and if a nest is identified, no construction activity shall take place within 250 feet of a non-raptor nest or 500 feet of a raptor nest, until the young have fledged and/or the nest is no longer determined to be active. A7-14

It further states that "Construction activity in the vicinity of any active nest shall be conducted at the discretion of a qualified monitoring biologist." We consider the latter statement to contradict the previous requirement, and counter to Fish and Game Code Section 3503, which prohibits "take" or destruction of birds' eggs or nests; and Section 3503.5, which prohibits "take" or destruction of raptor eggs or nests. We recommend the following language for both mitigation measures: "A minimum no-disturbance buffer of (250 or 500) feet should be delineated around active nests until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival." A7-15

Compensatory Mitigation: Mitigation measure 5.5-A15 stipulates that compensatory mitigation will be provided for loss of habitat including "coastal sage scrub habitat and/or other habitat", which should be amended to address those habitats which would actually be impacted. The designation of the Broderson site as coastal sage scrub in Exhibit 5 of Appendix G-2 and the text of the DEIR is incorrect; it is unclear how that designation came to be applied since that is one of the areas in the Project site which has been previously sampled and mapped. The document should be amended to address the natural communities which are actually going to be impacted by the Project in all locations, including but perhaps not limited to coastal dune scrub, central maritime chaparral, non-native grassland, riparian habitats, and freshwater emergent wetlands; and compensatory mitigation identified which would result in full mitigation for loss of those communities, including set aside of extant habitat, and for sensitive natural communities, restoration of degraded habitat such that there is a no net loss of acreage, function and value. There is an issue regarding the Broderson site as to previous commitments for compensatory mitigation (see below); in addition, it is not clear that all compensatory mitigation for all affected species and natural communities would be able to be accommodated at the Broderson site. A7-16

Broderson Site: The DEIR identifies the Broderson site in mitigation measure 5.5-A15 as a potential site for mitigating losses to coastal sage scrub (we believe this should be coastal dune scrub, see above), Morro shoulderband snail, Morro Bay kangaroo rat, and other sensitive species. It should be noted that this site has already been designated as mitigation for the previously approved iteration of the LOWWP, for impacts which have already been incurred on the treatment facility (the so-called Tri-W or Mid-town) site, as well as portions of the collection system, during the brief period of construction in 2005. The Broderson site was committed by the Community Services District (CSD) as mitigation for project impacts; the DEIR should include this previous history, and honor that commitment when the parcel is transferred from the CSD to the County. The DEIR could separate impacts from this Project which will be incurred at the Mid-town site, the leach field at the Broderson site, and various parts of the collection system which are identical to those of the previously approved project, from those impacts which will be in areas which are newly a part of the Project. Those impacts from the Mid-town site and the collection system would have been previously mitigated via compensatory set-aside of the Broderson site. Those impacts which are not a part of the previously approved project would have to be identified, along with another site at which to compensate residual impacts (if any) without "double dipping". A7-17

Habitat Restoration: The DEIR proposes in mitigation measure 5.5-A16 to compensate for impacts to coastal sage scrub (probably coastal dune scrub, see comments above) by development and implementation of variously, a Restoration Plan and/or a Habitat Mitigation and Monitoring Plan, which is intended to be prepared at a later date, the implementation of which would continue for five years, or until "requisite success criteria" are met. We do not believe that this approach is appropriate, as it defers development of the mitigation, the details of which are critical to understanding whether this proposed mitigation will be successful (i.e., mitigated to a level of less than significant, as claimed in the DEIR). A7-18

We recommend that a Management Plan be prepared for all the compensatory mitigation lands, including the Broderson site. It should address all habitats which would be affected by the Project, and for which compensatory mitigation is required. Long-term management, including restoration and maintenance of habitat and species, shall continue in perpetuity. Monitoring shall be done to determine that restoration success criteria have been met and that the mitigation lands are successfully supporting and maintaining those habitats and species for which they were established as compensatory mitigation areas. The County will need to establish a non-wasting endowment to fund the long-term management which is identified in the Plan. This Plan should be prepared prior to adoption of the EIR, so that it can be reviewed and determined that it is sufficient to mitigate Project impacts to a level of less than significant. A7-18 CONT

Avoidable Wildlife Impacts from Erosion Control Mesh Products: Due to this Project site's extensive interface with native wildlife habitat, the Department requests that erosion control and landscaping specifications allow only natural-fiber, biodegradable meshes and coir rolls. "Photodegradable" and other plastic mesh products have been found to persist in the environment, ensnaring and killing terrestrial wildlife. Plastic mesh erosion control products would likely cause unanticipated, avoidable impacts and potential "take" of listed species. A7-19

Deferred Mitigation: CEQA Guidelines (Section 15126.4 (a)(1)(B)) stipulates that it is not appropriate to defer feasible mitigation measures to a future date. Additionally, the courts have repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, are incomplete (*Sundstrom v. County of Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry v. City of Murrietta* (1995) 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc. v. County of Orange*(2005) 131 Cal. App. 4th 777). The DEIR does not demonstrate that the Project's potential impacts to rare plants and animals can be mitigated to less than significant levels.

The studies performed thus far are incomplete, and therefore identification of impacts is predictive or, in some cases, deferred. Surveys, impact assessment, and identification of mitigation measures are deferred until after CEQA determinations and Project approval, and prior to construction, thereby circumventing sufficient review by the public, by Trustee and potential Responsible Agencies, and by the decision makers. Besides deferring mitigation, this approach precludes opportunities to avoid impacts through design of the Project, in a way that avoids and minimizes impacts as CEQA dictates. Additionally, the sensitivity of some of the resources which are potentially found in the Project area could require Project redesign in order to fully mitigate potential Project effects, that is, Project impacts may not be mitigable by way of translocation or compensation, the two types of mitigation that are consistently identified for most classes of resources in the DEIR. Determination of impacts and appropriate mitigation at the eleventh hour is an approach we do not recommend, as it adds a high level of uncertainty to the Project. Finally, the County can neither find that impacts have been mitigated to a level of less than significant nor adopt a Statement of Overriding Considerations, in regards to impacts which have not been characterized and for which mitigation has been deferred to a later date. A7-20

Alternatives: The DEIR identified alternatives which consist of various collection, conveyance, treatment and disposal alternatives, in various combinations, with several treatment and disposal sites considered. In addition, the alternatives identify Project components which would

help to meet the Project's goals and objectives. Several of these additional Project components would be considered measures which would reduce one or more Project impacts, and as such, we recommend that they be included as mitigation measures and become required conditions of the Project. As approved Project components, they would be considered entitlements which may be constructed, but are not necessarily "required" to be constructed or completed; as a condition of Project approval, implementation would be required.

Examples of Project components which should be required as conditions of approval of the proposed Project include water conservation measures, and other measures to mitigate seawater intrusion to achieve a balanced basin at buildout; these two are interrelated. The water conservation elements proposed are: mandate that property owners' retrofit all low-flow fixtures; conduct public education to increase awareness of water conservation practices, and promote utility-sponsored water-saving appliance programs. In addition, we recommend that the County also pursue specific measures, such as a rate schedule that would encourage conservation of water and encourage or require through appropriate ordinances grey water management and recycling, to reduce demand on the aquifer as well as effluent going to the LOWW treatment facility. A7-21

Seawater intrusion is a direct impact of Project implementation, as septic systems are retired and wastewater is redirected for off-site treatment and disposal. In addition, seawater intrusion is an additional impact which results from the growth inducing nature of the Project, which is cumulative in nature and a foreseeable result of buildout. We consider this impact to be significant and mitigable, and should be addressed in this document. The alternatives analysis indicates that successful mitigation of seawater intrusion is a combination of reducing water production from the lower aquifer and increase recharge to the lower aquifer. While we recognize that Level 3 and 4 mitigation of seawater intrusion would be difficult to complete without participation by the water purveyors, we do not agree that this is beyond the scope of this Project or beyond the ability of County to pursue.

Seawater intrusion is a Project-related impact, and as such, the County should pursue programs that would include working with the purveyors to provide incentives and disincentives to the end user to effect water conservation through mechanisms such as retrofitting, water-use rate structures and grey-water recycling. The County can take the lead on such programs by framing the problem, funding programs, and developing local ordinances to require specific measures such as retrofitting and/or grey water recycling. The Lead Agency has the responsibility and authority to require mitigation measures which would reduce project impacts (CEQA Guidelines Section 15051), and must identify feasible alternatives which would eliminate or substantially lessen the significant environmental effects of the project (Section 15091), or make a finding as to what specific considerations (which considerations are enumerated in CEQA, and do not include unwillingness on the part of the project proponent) would make infeasible the mitigation measures or project alternatives which would reduce impacts to a level of less than significant. A7-22

Summary: The Department has reviewed the DEIR for the LOWWP and believes that there are deficiencies in the information, especially surveys, regarding fish and wildlife resources; that the information is critical to assessing impacts to such resources; and that the DEIR has not

adequately characterized impacts to fish and wildlife resources, particularly to listed species. As such, development of feasible mitigation measures which would avoid, minimize and fully mitigate Project impacts is not possible; and we do not support a number of the mitigation measures proposed in the DEIR for biological resources. In particular, there are a number of measures which would apply to species which are listed under CESA, and for which the County will need to secure authorization for "take." Additionally, the document fails to address Project impacts to wetlands and stream and riparian resources for which the County will need to notify the Department under Section 1600 et seq. Measures which would avoid, minimize, and mitigate Project impacts to fish and wildlife resources will need to be identified and included in the final environmental document. My staff remains available to work with you to develop feasible mitigation measures based on the most appropriate level of information. A7-23

I reiterate that the Department views this Project as a potential benefit to natural resources because of its potential to alleviate groundwater contamination and to curtail runoff of pollutants into Morro Bay. We appreciate the ongoing positive working relationship with the County and are prepared to continue to work with the County to help develop a Project that has minimal impacts and still meets the community's needs.

Thank you for the opportunity to comment. Should you have questions regarding our comments or wish to schedule a meeting to discuss, please contact Deborah Hillyard, Staff Environmental Scientist, at (805) 772-4318 or via email at dhillyard@dfg.ca.gov.

Sincerely,

Jeffrey R. Single, Ph.D.
Regional Manager

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California Department of Fish and Game, Jeffrey R. Single, January 30, 2009 (Letter A7)

Response to Comment A7-1

This comment states that there is an incorrect characterization of the consultation process as mitigation which would compensate for impacts to State- and Federally-listed species, in addition to incorrectly characterizing the process for obtaining "take" authorization for species listed under the California Endangered Species Act (CESA). This comment is relevant to Mitigation Measure 5.5-A1 and 5.5-A2 of the Draft EIR. It is acknowledged that the consultation process itself does not serve as mitigation to reduce impacts to listed species; this is not the intended approach or purpose of Mitigation Measure 5.5-A1 and 5.5-A2. The purpose of these measures is to ensure that consultation with the appropriate agencies is initiated prior to the approval of the project. It should be acknowledged that it would be the responsibility of the USFWS, NMFS, and CDFG to develop reasonable and prudent measures to minimize effects to listed species during the consultation process.

Appendix Q provides a supplemental evaluation for the preferred project. As a result of this evaluation and the findings of botanical surveys, it was determined that the preferred project is not likely to adversely affect or result in potential take of any state-listed species. Therefore, the project would not require consultation with the CDFG for take authorization or the issuance of an Incidental Take Permit pursuant to Section 2081 of the California Fish and Game Code.

The comment provides further clarification regarding state-fully protected species for which CDFG would not authorize any take, and states that full protected species would have to be treated as such in any federal incidental take permit or incidental take statement in order to be consistent with California Fish and Game Code. Mitigation Measures 5.5-A5 and 5.5-A12 would ensure that the project does not result in take of state-fully protected species with the potential to occur in the project area.

As proposed within the modified Mitigation Measure 5.5-A5 below, the project proponent will enter into a "no take agreement" or similar effective agreement with CDFG to avoid take and any adverse effects to the state-fully protected Morro Bay kangaroo rat.

5.5-A5 ~~Prior to project construction and pending determinations made by the USFWS, a biologist permitted by the USWFS shall conduct protocol trapping surveys for the Morro Bay kangaroo rat within all suitable habitat that occurs on and in the immediate vicinity of the proposed impact area. Protocol trapping efforts shall be conducted in coordination with the USFWS, CDFG, and the Endangered Species Recovery Program (ESRP), and all trapped specimens shall be retained for consideration of captive breeding by the USFWS, ESRP or other agency responsible for the recovery of extremely endangered species.~~

The County shall provide funding for on-going recovery activities for the Morro Bay kangaroo rat conducted by Cal Poly and the US Fish and Wildlife

Service (through recovery permit holder Francis Villablanca) to better understand how to avoid the species during project construction and operation. Recovery activities at the Tonini Ranch shall include survey and trapping on all suitable habitat areas currently considered for sprayfields. If the species is determined to be present, the County shall adjust sprayfield boundaries to avoid the habitat in accordance with a "no take agreement".

Prior to construction, the County shall formalize a "no take agreement" with the California Department of Fish and Game for the Morro Bay kangaroo rat. The "no take agreement" shall detail measures to avoid the species through sprayfield redesign, exclusion fencing, and other measures as necessary dependant upon the results of the protocol surveys conducted at the Tonini Ranch. The "no take agreement' shall also outline a monitoring and contingency plan for the Broderson leachfield, as on-going maintenance of the leachfield may create suitable Morro Bay kangaroo rat habitat.

As proposed within the modified Mitigation Measure 5.5-A12 below, the project shall avoid take and any adverse effects to the state-fully protected white-tailed kite.

5.5-A12 If ~~the removal or trimming of any trees or shrubs is~~ any construction activities are proposed during the general raptor breeding season ~~(April 1 through July 31)~~ (February 1 through August 31), a pre-construction survey shall be conducted by a qualified biologist within 10 calendar days prior to ~~grading~~ the onset of construction activities ~~within any project impact area~~ to identify ~~all active raptor nests in areas impacted throughout project construction and implementation~~ any active raptor nests within 500 feet of the proposed impact area. If an active raptor nest is identified during the pre-construction survey, ~~no construction activity shall take place within a minimum of 500 feet of any active raptor nest until the young have fledged (as determined by a qualified biologist) and/or the nest is no longer determined to be active. Construction activity in the vicinity of any active nest shall be conducted at the discretion of a qualified monitoring biologist.~~ a minimum no-disturbance buffer of 500 feet shall be delineated around active nests until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

Pursuant to Section 2050 of the CFG Code, the CDFG will not permit any impacts to the California state fully protected raptor white-tailed kite. If an active nest or breeding territory is detected during preconstruction surveys for nesting birds, no construction activities shall take place within 500 feet of

the location of the active nest. The area shall be completely avoided and fenced to allow for an adequate buffer from construction activities. A qualified biologist shall be retained to monitor the activity of the nest during the breeding season until it is determined that the nest is no longer active (i.e. all young have fledged the nest and ~~are~~ no individual kites are dependent on the nest).

Response to Comment A7-2

This comment states that the Draft EIR proposes to defer the identification of impacts to listed species until "pre-construction surveys" are completed, and that such an approach is inappropriate and inconsistent with both the California Endangered Species Act (CESA) and the California Environmental Quality Act (CEQA). The comment goes on to state that this approach would leave the responsibility of identifying mitigation measures to the CDFG, to be determined at a later date, after the project is approved.

Impacts to listed species have been adequately addressed and analyzed pursuant to both the CESA and CEQA as documented in Draft EIR Section 5.5, Biological Resources, and Appendix G, Biological Resources, and further substantiated within this document. The Draft EIR has incorporated the results of an extensive array of studies, including habitat assessments, protocol-level surveys, and pre-construction surveys that have confirmed the potential for occurrence, presence/absence, and abundance of listed species and their habitat within the study area for the proposed project. The results of previous studies should be accepted as valid and applicable information to the impact analysis in the Draft EIR. It is acknowledged that pre-construction surveys do not replace protocol-level surveys in purpose and scope. Pre-construction surveys are not proposed within any measures unless there is a preceding protocol-level survey effort that had confirmed presence or absence. The potential need for more recent surveys for non-listed species is acknowledged. Surveys for non-listed species will be ongoing, if required, as part of the Coastal Development Permit application.

Most recently, and as part of the this EIR effort and the forthcoming Biological Assessment, biologists from the County Department of Public Works, MBA, and Villablanca Biological Consulting (Francis Villablanca) conducted site-specific surveys within the preferred project. These recent surveys include the following:

- California red-legged frog surveys by MBA (5/20/08 and 5/21/08): T'Shaka Toure and Karl Osmundson.
- California red-legged frog surveys by County Department of Public Works staff (1/12/09): Eric Wier and Kate Ballantyne.
- Plant surveys for Morro manzanita and Indian Knob mountain balm by County Department of Public Works staff (12/23/08): Eric Wier, Kate Ballantyne and Kelly Sypolt.

- Plant surveys for Morro manzanita and Indian Knob mountain balm by County Department of Public Works staff (1/12/09): Eric Wier, Kate Ballantyne, and Katie Drexhage.
- Habitat Assessment for Morro shoulderband snail at Tonini Property by County Department of Public Works staff (2/2/09): Kate Ballantyne and Eric Wier
- Habitat Assessment for Morro Bay Kangaroo Rat at Tonini Property (2/2/09): Francis Villablanca
- General biological surveys of Tonini Property, Los Osos Creek at Los Osos Valley Road, and Mid-town property (2/20/09): Kate Ballantyne and Eric Wier (County Department of Public Works) and Karl Osmundson (MBA)

Recent surveys for the state-listed Indian Knob mountainbalm resulted in negative findings. Therefore, the proposed project is not anticipated to result in any impacts to state-listed species, and no further measures or consultation requirements are warranted. Implementation of Mitigation Measure 5.5-A15 would ensure that suitable and potentially-occupied habitat for these species on the Broderson site is secured and preserved in perpetuity.

Response to Comment A7-3

This comment is advising the County that Morro Bay kangaroo rat is designated as a fully protected species under California Fish and Game Code Section 4700, along with American peregrine falcon, brown pelican, California black rail, and white-tailed kite, which are also designated as fully protected under California Fish and Game Code Section 3511. The comment states that all of these fully protected species have the potential to occur within the proposed project site, and as a result, measures should be implemented to preclude "take" from occurring, and such measures should be identified prior to certification of the EIR, be required as project conditions, and included in a Memorandum of Understanding between the County and CDFG.

It should be acknowledged that the fully protected status of all of these species is correctly referenced within Draft EIR Section 5.5, Biological Resources, and Appendix G. Appendix G-1 Expanded Biological Resources Analysis' Table 5.5-2, and Attachment B in the Biological Resources Assessment within Appendix G, provide determinations for special-status species occurrence within the study area for the project. Brown pelican and California black rail were determined not likely to occur due to lack of suitable habitat, and American peregrine falcon was determined to have a moderate potential to forage over portions of the study but not likely to nest due to lack of suitable habitat. The white-tailed kite was determined to have a potential to nest and forage within the study area. Mitigation Measure 5.5-A12 is considered adequate to preclude any "take" from occurring to this species.

As proposed within the modified Mitigation Measure 5.5-A5, the project proponent will enter into a "no take agreement" or similar effective agreement with CDFG to avoid take and any adverse effects to the state-fully protected Morro Bay kangaroo rat. See Response to Comment A7-1.

Response to Comment A7-4

This comment states that the Draft EIR incorrectly identifies the CDFG as having authority over Environmentally Sensitive Habitat Areas (ESHA). It is acknowledged that the CDFG does not have authority over ESHA. The California Coastal Commission has the responsibility for implementing the California Coastal Act, and through the certified Local Coastal Plan, has delegated permitting authority over ESHA lands to the County through their Coastal Zone Land Use Ordinance.

The reference to the CDFG having authority over ESHA areas within Section 3.4.3, page 3-72, paragraph 2, is deleted and reads as follows:

> ***Environmentally Sensitive Habitat Area (ESHA)***
>
> Policy 19 of the Environmentally Sensitive Habitats section in the San Luis Obispo Coastal Plan designates portions of the proposed project area as an ESHA. The ~~CDFG and~~ CCC will review any potential impacts to ESHA areas and require that these areas be avoided and/or that the proposed project incorporate mitigations for any potential impacts. Typical mitigations include providing future habitat protection and enhancement on or offsite.

The comment goes on to state that the Draft EIR lacks consistency between the text regarding Terrestrial Habitat Protection under the Coastal Zone Land Use Ordinance and Exhibit 5.5-3 depicting ESHA lands. Exhibit 5.5-3 depicts Existing Terrestrial Habitat ESHA lands mapped according to the combining designation maps. The text of the Draft EIR addresses areas that contain sensitive terrestrial habitat on the Broderson and Mid-town properties that are not mapped as Existing Terrestrial Habitat ESHA lands according to the combining designation maps, and therefore, are not depicted on Exhibit 5.5-3. These areas are discussed in the text as "potential" terrestrial habitat ESHA, of which, any incurred impacts would be addressed pursuant to Section 23.07.176 of the Coastal Zone Land Use Ordinance for Terrestrial Habitat Protection.

The comment goes on further to state that the Draft EIR incorrectly characterizes the distinction between species listed as threatened or endangered under CESA, those which are fully protected under other sections of the Fish and Game Code, and those species which are identified as Species of Special Concern, as well as the CDFG's authorities in regard to those classes of resources. The commentor is directed to the regulatory setting text beginning on page 5.5-69 of Appendix G-1, and E-1 of Appendix G-2 of the Draft EIR.

Response to Comment A7-5

This comment states that the Draft EIR and its appendices rely heavily on information gathered for previous projects, none of which addresses the Cemetery, Giacomazzi, Branin, or Tonini sites, or proposed pipelines to access these sites. A reference is made to the number of days spent in the field during April and May of 2008 for habitat assessment surveys, and that these surveys and the information resulting from them are not adequate to formulate an impact assessment or analyzing project siting alternatives. The comment states that the CDFG cannot concur that all potential

significant impacts have been identified or that the impacts will be mitigated to a level of less than significant.

The Draft EIR and appendices reference a total of six site visits conducted on April 8, 9, 23, and 24, 2008, and May 20 and 21, 2008. These surveys not only include habitat assessment surveys, but also protocol-level surveys for California red-legged frog, and focused delineation surveys of all areas potentially supporting waters, wetlands, stream courses, and riparian habitat on the Cemetery, Giacomazzi, Branin, or Tonini sites. Specific methodologies for all surveys are detailed within their respective reports. The commentor is misinterpreting the term "habitat assessment" to literally mean a survey whose only objective is to determine the need for subsequent surveys. Determining the need for additional surveys is one of many elements in the scope of a habitat assessment survey, and the commentor is directed to the methodology descriptions provided in Appendix G of the Draft EIR for clarification on the scope of these surveys. The surveys were directed within all areas proposed for each project analyzed in the Draft EIR, with a focused emphasis on the preferred project.

The commentor disqualifies the usefulness of the habitat assessment level surveys in formulating an impact analysis, however does not acknowledge that the majority of the areas surveyed at the habitat assessment level do not warrant any additional surveys (including protocol-level surveys) due to the fact that areas proposed for developments (with adequate setbacks incorporated) do not support suitable habitat for the species that have the potential to occur in the area. This finding is very relevant to the impact analysis. The resulting information of the surveys was not only sufficient in formulating the impact assessment, but was also used extensively as a constraints tool in the siting and design of the proposed projects and the determination of adequate setback and avoidance distances. Of greater importance than determining the need for additional surveys, the habitat assessment surveys were used to rule out the consideration of proposed developments within sensitive areas that contain suitable habitat for species. The surveys were effective in reaching a design compatible with the least environmentally damaging project, the usefulness of which is not questionable, but clearly effective in considering all alternatives, avoiding sensitive areas, and minimizing environmental impacts in the beginning phases of design.

The commentor is reminded that numerous surveys have been conducted between the years of 1997 and 2008 to determine the presence/absence of species that have the potential to occur within the study area. These surveys are referenced within the Draft EIR and Appendix G and were important in understanding known presence/absence, abundance, and species distribution in relation to project areas. See the supplemental evaluation of the preferred project, Appendix Q.8, for an elaboration on the impact assessment.

See also Response to Comment A7-1 addressing state-fully protected species and Response to Comment A7-2 addressing recent survey efforts for state-listed species.

Response to Comment A7-6

This comment expresses the need to conduct surveys for both plants and animals to assess impacts and mitigation for the project. Comment noted. See Response to Comment A7-2 regarding recent surveys and findings. See the supplemental evaluation of the preferred project, Appendix Q.8, for an elaboration on the impact assessment and the proposed mitigation.

Response to Comment A7-7

This comment provides guidance for conducting botanical surveys according to guidelines developed by the CDFG and the USFWS, and recommends that certain methodologies be implemented during surveys. The commentor is directed to Response to Comment A7-2 regarding recent surveys and findings for listed plant species. The recent botanical surveys include those conducted for the Morro manzanita and Indian Knob mountainbalm in December 2008 and January 2009. These species are conspicuous perennial evergreen shrubs whose positive identification can be confirmed throughout all portions of the year. No naturally occurring specimens of Morro manzanita were observed within any portions of the study area that were determined to contain suitable habitat. Although some landscape specimens may occur within the action area, these specimens are not protected. No impacts are anticipated to occur to this species. Similarly, no Indian Knob mountainbalm were observed within any portions of the study area that were determined to contain suitable habitat. No impacts are anticipated to occur to this species as well.

There is anecdotal evidence that suggests the state-listed Monterey spineflower occurs on the Morro Dunes Ecological Preserve east of the Broderson property, and on the Broderson property itself. Surveys and expert identification will be required for the Broderson site during the appropriate blooming season to finally determine presence/absence and if this plant's known range should be extended south. Currently, it is assumed a sparse population of Monterey spineflower exists in the Broderson leachfield area until further investigations confirm its presence. Surveys will be conducted in 2009 within all appropriate habitat. It is unlikely that surveys will confirm the presence of this species on the Broderson site. If the species is discovered within the impact areas, seeds will be collected and later sown within unaffected portions of Broderson site that will be preserved in perpetuity. Implementation of mitigation Measure 5.5-A13 would reduce potential impacts to the Monterey spineflower to less than significant.

Mitigation Measure 5.5-A13 is modified to state the following:

5.5-A13 Prior to project construction and within all areas on the Broderson ~~and Mid-town properties~~ property that contain suitable habitat for ~~Morro manzanita,~~ Monterey spine flower~~, and Indian knob mountainbalm~~, a qualified biologist ~~approved by the USFWS~~ shall be retained to conduct botanical surveys to identify ~~all sensitive plant species within and in the immediate vicinity of the proposed impact area~~ Monterey spineflower presence. Surveys shall be conducted during the local blooming period~~s~~ for ~~each~~ the species, which

typically occurs between April and June, and according to recommendations and guidelines prepared by the CDFG and CNPS. If positively identified, ~~A~~all specimens shall be clearly demarcated with flagging, and avoided to the maximum extent feasible during construction. A qualified monitoring biologist shall be retained to monitor all construction activities in the immediate vicinity (within ~~100~~ 25 feet) of any flagged specimens that will not be removed as a result of construction activities. If specimens are positively identified within the leachfield impact area, the seeds of those specimens shall be collected and sown within suitable habitat located outside of the leachfield impact area and within the Broderson property.

~~Any impacts that are proposed to the Morro manzanita, Monterey spineflower, and Indian knob mountainbalm shall proceed according to stipulations determined through wildlife agency consultation. Mitigation for Morro manzanita shall include replacement at a minimum ratio of 5:1, unless determined otherwise during wildlife agency consultation. Transplantation and relocation of salvaged specimens, if appropriate and feasible, should be considered during wildlife agency consultation. Salvaged specimens should be transported to an offsite location that is approved by the USFWS, and should be assessed against survival and reproduction success criteria according to a mitigation monitoring plan.~~

The County shall provide a written report to USFWS within 90 days following the completion of the ~~proposed~~ project. The report ~~must~~shall document the number of ~~Morro manzanita,~~ Monterey spineflower~~, and Indian knob mountainbalm~~ specimens removed ~~and relocated~~ from project areas, the locations of ~~all Morro manzanita,~~ areas seeded with Monterey spineflower seeds~~, and Indian knob mountainbalm relocations~~, and the number of ~~Morro manzanita,~~ Monterey spineflower~~, and Indian knob mountainbalm~~ specimens ~~known~~ found to be dead or damaged as a result of construction activities. The report shall contain a brief discussion of any problems encountered in implementing minimization measures, results of biological surveys, observations, and any other pertinent information such as the acreages affected and restored, or undergoing restoration, of each habitat type.

Recent general biological surveys of the Tonini property in 2009 resulted in incidental observations of four concentrations of Blochman's dudleya, a non-listed species designated by the CNPS as a List 1B.1 plant species. The concentrations do not represent a significant portion of this species population as a whole, with the largest concentration supporting an estimated 200 individuals. As a result of the occurrences of this species, the sprayfield element of the preferred project is setback to

avoid the larger concentrations onsite. Impacts to this species are anticipated to be less than significant.

Additional botanical surveys for non-listed plant species are expected to resume during the 2009 season according to recommended protocol, if required, as part of the Coastal Development Permit application. Due to the nature of impacts and likelihood of occurrence for non-listed plant species, impacts are anticipated to be less than significant.

Response to Comment A7-8

This comment states that the Draft EIR lacks a meaningful discussion of impacts to natural communities, including those which would be considered as ESHA under the California Coastal Act. Potential impacts to the natural communities that occur on or in the immediate vicinity of the study area are addressed within Impact 5.5-B, Impact 5.5-C, and Impact 5.5-E of the Draft EIR. Impact 5.5-E specifically addresses those natural communities which would be considered as ESHA. Further discussion is provided within Appendix G of the Draft EIR. Potential impacts to foraging habitat for sensitive species, including raptors, are discussed beginning on page 5.5-91 of Impact 5.5-A of Appendix G-1 of the Draft EIR.

Response to Comment A7-9

This comment states that central maritime chaparral dominated by the Federally-endangered Morro manzanita is considered a rare natural community by the Natural Diversity Database, and as such, impacts should be addressed. The central maritime chaparral that exists on the Broderson property is not dominated by Morro manzanita and will not be impacted by the proposed project. No discussion of this rare natural community is included in the Draft EIR due to the fact that it does not exist within the study area. Appendix G provides a detailed description of the central maritime chaparral that occurs on the Broderson property. The Draft EIR and Appendix G both conclude that no impacts will occur to central maritime chaparral.

Response to Comment A7-10

This comment states that freshwater emergent wetland has the potential to be impacted by the project, as do various wetland and riparian communities. The preferred project will not occur in the vicinity of any areas that support freshwater emergent wetland. Furthermore, the preferred project includes adequate setbacks from wetlands and riparian communities such that direct impacts will not occur and indirect impacts are minimized. The comment goes on to state that wetland features are considered to be sensitive under the Coastal Act, that revisions to the text and mapping be made to provide clarity between the different wetland types (State Regulated Wetlands and Federally Regulated Wetlands) that occur within the study area, and that Mitigation Measure 5.5-C be expanded to address State wetlands which would be impacted by the project. All wetland types are adequately discussed in the text, mapped within exhibits, and addressed within the impact analysis and mitigation. The distinction between which agency has regulatory authority over different wetland types is clear in the Draft EIR and Appendix G which specifically address the presence of different wetland types within

the study area and impact areas that are regulated by the USACE, RWQCB, CDFG, and the CCC. The commentor is directed to the text within Impact 5.5-B, Impact 5.5-C, and Impact 5.5-E of the Draft EIR, Impact 5.5-B, Impact 5.5-C, Impact 5.5-E, and Table 5.5-3 of the Expanded Biological Resources Analysis (Appendix G-1), and the Biological Resources Assessment and Delineation of Jurisdictional Waters and Wetlands (Appendix G-2).

The County will be required to obtain a Coastal Development Permit for impacts to "State Regulated Wetlands" and other resources regulated by the California Coastal Commission. The Coastal Development Permit for the project will include specific conditions and special considerations, all of which the County shall be required to implement during all relevant phases of development.

Response to Comment A7-11

This comment provides clarity on how to address potential impacts to the Morro Bay kangaroo rat. The comment is appreciated as it offers guidance in revising the proposed approach. It is emphasized that the County is committed to avoiding any take and minimizing all potential adverse effects to this critically endangered and fully protected species. No effects to Morro Bay kangaroo rat are expected because this species has not been detected to date and is not expected to occur within the proposed impacts area for the preferred project. Previous habitat assessments conducted for the Broderson and Mid-town properties concluded that the sites do not provide suitable habitat for Morro Bay kangaroo rat. However, according to recent efforts headed by Dr. Francis Villablanca in conjunction with the USFWS, suitable habitat is noted on portions of the proposed sprayfield area on the Tonini property.

Due to the fact that the project will be constructed over multiple years prior to operation, there will be adequate time to complete protocol-level surveys within all suitable habitat within the proposed sprayfield area on the Tonini property. Portions of the proposed sprayfield area have been subject to the first year of protocol surveys by Dr. Francis Villablanca which resulted in negative findings. The second year of surveys within these areas result will proceed in the spring of 2009. If the second year of surveys also result in negative findings, as expected, this species will be presumed absent from those areas. ‘

New suitable habitat areas were identified outside of the areas included in the first year of protocol surveys mentioned above, and these new areas will have to be surveyed for their first year beginning in the spring of 2009. If the species is not detected during the first year surveys in 2009, the second year of protocol surveys will be conducted in 2010. If the second year of surveys within the new suitable habitat areas also result in negative findings, this species will be presumed absent from all areas surveyed on the Tonini property.

If, at the end of the survey period, it is found that there are areas occupied by the Morro Bay kangaroo rat, the County shall avoid those areas by adjusting the sprayfield boundaries to be entirely contained within areas that are not suitable for the species.

The commentor is directed to Response to Comment A7-1 for modifications to Mitigation Measure 5.5-A5.

Response to Comment A7-12

This comment states that Mitigation Measure 5.5-A13 pertaining to Indian Knob mountainbalm is inadequate in addressing impacts to the species. The commentor is referred to Response to Comment A7-2 and Response to Comment A7-7.

Response to Comment A7-13

This comment provides recommendations for more feasible mitigation to reduce project impacts on the Morro Bay blue butterfly to less than significant levels. These recommendations were considered and alternative mitigation was discussed with input from biologists with the County Department of Public Works.

Mitigation Measure 5.5-A10 shall be revised to state the following:

5.5-A10 ~~Construction activities on the Broderson and Mid-town properties shall be conducted in conjunction with relocation efforts for the Morro Bay blue butterfly. Prior to construction activities on the Broderson and Mid-town properties, a qualified biologist shall be retained to conduct relocation efforts for the Morro Bay blue butterfly. Relocation efforts shall include multiple capture and transport surveys of adult Morro Bay blue butterflies throughout the adult flight season (April to June), or according to other protocol recommended for similar blue butterfly species.~~ Prior to construction activities on the Broderson and Mid-town properties, a qualified biologist shall be retained to identify and demarcate all host silver lupine shrubs that occur within the proposed impact area. The qualified biologist shall inspect each host lupine for the presence of any Morro Bay blue butterfly eggs or pupae. In an effort to avoid mortality of butterfly eggs or pupae prior to the onset of adult emergence, any host lupine specimens determined to contain eggs or pupae shall be considered for relocation outside of the proposed impact area and within suitable coastal dune scrub habitat on either the Broderson or Mid-town properties.

Any planting and restoration efforts proposed as mitigation for the project shall include silver dune lupine (*Lupinus chamissonis*) within the plant palette to encourage the species to continue to use the area.

Response to Comment A7-14

This comment provides recommendations regarding the language of mitigation measures for nesting birds and nesting raptors. The recommended language is incorporated into modified Mitigation

Measure 5.5-A11 and Mitigation Measure 5.5-A12. The commentor is directed to Response to Comment A7-1 addressing modified Mitigation Measure 5.5-A12.

Mitigation Measure 5.5-A11 is modified to state the following:

5.5-A11 If ~~the removal or trimming of any trees or shrubs is~~ any construction activities are proposed during the general bird breeding season (February 1 through August 31), a pre-construction survey shall be conducted by a qualified biologist within 10 calendar days prior to ~~grading~~ the onset of construction activities ~~within any project impact area~~ to identify ~~all active raptor nests in areas impacted throughout project construction and implementation~~ any active non-raptor bird nests within 250 feet of the proposed impact area. If an active nest is identified during the pre-construction survey, ~~no construction activity shall take place within a minimum of 250 feet of any active nest until the young have fledged (as determined by a qualified biologist) and/or the nest is no longer determined to be active. Construction activity in the vicinity of any active nest shall be conducted at the discretion of a qualified monitoring biologist.~~ a minimum no-disturbance buffer of 250 feet shall be delineated around active nests until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. For sensitive species, including Allen's hummingbird, yellow warbler, and loggerhead shrike, the distance and placement of the construction avoidance shall be a minimum of 250 feet unless otherwise determined through consultation with the CDFG.

Response to Comment A7-15

This comment provides further recommendations regarding the language of mitigation measures for nesting birds and nesting raptors. The commentor is directed to Response to Comment A7-14.

Response to Comment A7-16

This comment expresses a concern with Mitigation Measure 5.5-A15 regarding compensatory mitigation and nomenclature of habitat types that will be impacted by the preferred project. The clarification on habitat names is noted, however it should be acknowledged that the scrub habitat on the Broderson and Mid-town properties includes elements of both a typical "coastal sage scrub" and typical "coastal dune scrub" plant community, and there are some ecotonal and disturbance factors associated with both properties that were considered when characterizing the habitat. Naming habitat types is always problematic when considering varying species dominance, ecotones, disturbance factors, and most importantly, when attempting to assign areas sampled to a standard classification system under the scope of work at hand. For the purposes of habitat descriptions and mapping for the Draft EIR and appendices, the names "coastal sage scrub" and "coastal dune scrub" are used in

synonymy. Detailed habitat descriptions and rationale for nomenclature for all habitat types that occur within the study area are provided in Appendix G of the Draft EIR. Regardless of what nomenclature is used, the proposed compensatory and creation/enhancement mitigation takes into consideration the functions and values associated with the habitat being impacted to ensure it is truly providing for "in-kind" mitigation. The proposed mitigation includes acquiring and creating/enhancing habitat that is directly contiguous with impacted habitat, shares the same essential physical attributes (vegetative compositions, soils, slope, aspect, etc.), and supports or has the potential to support the same plant and animal species.

The comment suggests that the document should be amended to address the natural communities that are actually going to be impacted by the project in all locations. The commentor is directed to the impact analysis of the Draft EIR and Appendix G in identifying the habitats. No central maritime chaparral or freshwater emergent wetlands will be impacted by the preferred project. Impacts to non-native grasslands are considered less than significant due to the fact that the preferred project will not result in the permanent removal of this habitat. It is likely that the non-native grasslands on the Tonini property that fall within the sprayfield area will continue to maintain pre-project functions under post-project conditions in providing foraging and live-in habitat for a variety of plant and animal species. Direct impacts to riparian habitat are anticipated to be limited to the trimming of a few arroyo willow trees for the installation of pipelines on Los Osos Valley Road at the Los Osos Creek crossing. This trimming is anticipated to be equivalent in scope to routine maintenance activities that occur within the road right-of-way. Any impacts to riparian habitat would be mitigated in-full through the project's Coastal Development Permit and Streambed Alteration Agreement, should it be determined necessary during the regulatory permitting process.

The preferred project is avoiding and enhancing good quality vernal marsh habitat and riparian/riverine areas that are occupied by California red-legged frog on the Tonini property. This represents a set aside of extant habitat in addition to the habitats being avoided, restored/enhanced, and preserved in perpetuity on the Broderson property. Vernal marsh and riparian/riverine habitats on the Tonini property will be enhanced from their current state as a result of the land use conversion resulting from the project. The removal of grazing and agricultural activities within and around these habitats will result in an increase in water quality and stream function. Under pre-project conditions, these habitats are exposed to direct disturbance and degradation from agricultural activities (in-stream equipment use, stream course diversion, disruption of natural hydrology, etc) and cattle use (excessive trampling, direct water contact, fecal deposition, grazing, etc.). These adverse uses under pre-project conditions would no longer occur under post-project conditions. These beneficial affects would have immediate and long-term value to downstream waters within Warden Creek and flows discharging into Morro Bay.

The proposed compensatory mitigation on the Broderson site will provide for the preservation in perpetuity of 72 acres of a combination of upland scrub, chaparral, and woodland habitat that would provide adequate mitigation to offset the loss of habitat for the Morro shoulderband snail. Previous

studies have determined that the Broderson site supports this listed species and its habitat, and that preservation of the site is key in enhancing the function of the general area by connecting adjacent lands. The acquisition of the site would offset habitat loss at a significant ratio that will be important in the future assembly of a preserve system for the community of Los Osos.

The commentor is also directed to the supplemental evaluation of the preferred project contained within Appendix Q. See also Response to Comment A7-17 for clarification on the Broderson site as adequate mitigation.

Response to Comment A7-17

This comment states that the Broderson site has already been used as mitigation for the previous iteration of the project.

The County agrees with this comment: where the current project is identical to the previous LOCSD project, the mitigation (including Broderson) will be the same. Where new, or more severe, impacts are identified, additional mitigation measures have been identified. That is, the proposed compensatory mitigation on the Broderson site is aimed only to mitigate impacts that will be incurred as a result of developments on the Mid-town site, the leachfields on the Broderson site, and various parts of the collection system throughout Los Osos, because these impacts are identical to or less than those of the previous LOCSD project. Another mitigation site in addition to the Broderson site is not required. Other natural communities and species impacts associated with other project areas will be adequately mitigated through alternative means as identified in the Draft EIR.

With regard to drawing similarities in impacts and mitigation between the proposed project and the previously approved iteration of the project, and particularly, the statement that the impacts from the Mid-town site and the collection system being previously mitigated, the significant difference between the proposed project and the previously approved iteration is there are substantially fewer developments proposed on the Mid-town site, and therefore less impacts to associated species and habitat. The proposed pump station development on the Mid-town property are very limited and entirely contained within the previous impact footprint. The commentor should acknowledge that the preferred project will be impacting significantly less coastal dune scrub habitat than the previously approved iteration of the project, and therefore will be impacting significantly less habitat for Morro shoulderband snail and other sensitive species associated with coastal dune scrub.

Additionally, there are beneficial effects to areas associated with the proposed project that were highly adverse affects to those same areas in the previously approved iteration. The remaining portions of the Mid-town site that will be avoided in the proposed iteration should not be dismissed as permanently impacted land because they were cleared in 2005. Since the 2005 impacts from the previously approved iteration, the habitat on the Mid-town site continues to recover and improve in function, with most areas showing an increase composition and coverage of coastal dune scrub associated species. It should be acknowledged that the large majority of the Mid-town site that will

be unaffected by the proposed project would continue to succeed in function and provide high value habitat for listed species.

The commentor is directed to the supplemental evaluation of the preferred project contained within Appendix Q for a more detailed discussion.

Response to Comment A7-18

This comment raises concerns with the language and effectiveness of Mitigation Measure 5.5-A16 and provides direction in the mitigation strategy. The comment and recommendations within are appreciated.

Mitigation Measure 5.5-A16 is modified to state the following:

5.5-A16 The existing coastal sage scrub within the Broderson property shall be restored and maintained to promote the land's function and value as suitable habitat for sensitive plants and wildlife that are local or endemic to the area. Restoration activities shall be conducted on the Broderson property by qualified personnel with expertise in restoration ecology and knowledge of sensitive plant and wildlife species in the area. Restoration activities shall be conducted according to a Restoration Plan or similar plan specifically prepared for the effort and approved by USFWS, and CDFG~~, and/or the CNPS~~. Similarly, restorative measures and maintenance shall be implemented according to ~~a Habitat Mitigation and Monitoring Plan~~ the Resource Management Plan prepared for the preservation lands on the Broderson property, or similar implementation plan that shall require a schedule and program for monitoring and reporting the progress of the restoration effort.

The ~~Restoration Plan~~ Resource Management Plan shall include measures for the removal and eradication of invasive exotic plant species known to occur in the local area, including veldt grass and pampas grass. Activities that involve the removal of invasive species should not result in unnecessary trampling or removal of native species, and techniques for invasive removal shall be least damaging to native species. Any disturbed portion of acquired mitigation lands should be appropriate for restoration into coastal sage scrub habitat and have the potential to support the functions and values necessary for the Morro shoulderband snail, the Morro Bay kangaroo rat, and other sensitive species.

The restoration effort shall include the implementation of a seed collection program to gather seeds to be used during restoration from native sources. The seed collection program shall be prepared for approval by the County

prior to project construction activities. The seed collection program shall include the use of native plants that will be removed as a result of the project, including but not limited to, mock heather (*Ericameria ericoides*), silver dune lupine (*Lupinus chamissonis*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), bush monkey flower (*Mimulus aurantiacus*), and deerweed (*Lotus scoparius*). Collection shall take place by qualified personnel with expertise in botanical resources during the appropriate time of year for seed production and harvesting.

The restoration effort shall be monitored against permanence standards for a minimum of five years, after which the maintenance and monitoring of the restored areas shall be covered within the management directives contained within the Resource Management Plan. The performance standards for year five shall include, at minimum, at least 80 percent native plant species coverage and no greater than 1 percent coverage of invasive non-native plant species (e.g. pampass grass, veldt grass). The restored areas must demonstrate a continued ability to support the functions and values necessary to sustain the Morro shoulderband snail. All monitoring shall be conducted by qualified personnel with expertise in botanical resources and knowledge of sensitive species that occur in the local area, including the Morro shoulderband snail, Morro Bay kangaroo rat, and Morro Bay blue butterfly. Quarterly monitoring shall be conducted for the first two years of the restoration effort, with annual monitoring efforts to follow for the remaining three years.

The County shall provide annual reports to the USFWS documenting the results of all restoration and monitoring activities. Annual reports shall be provided to the USFWS for a minimum of five years or until it is determined by the USFWS that requisite performance criteria have been met. These reports should include any noted changes in the plant community structure or composition or surface hydrology down-slope of the Broderson leachfields, in addition to other requirements as determined through USFWS consultation and stipulated within permit conditions.

Response to Comment A7-19

This comment recommends the use of natural-fiber, biodegradable meshes and coil rolls in erosion control and landscaping. This comment is noted. The use of these products to prevent otherwise avoidable impacts to wildlife species and the environment is incorporated into the mitigation measures for the preferred project. The commentor is directed to the supplemental evaluation contained within Appendix Q for mitigation measures for the preferred project.

Response to Comment A7-20

This comment is expresses concern regarding the deferred mitigation in the Draft EIR and points out the need for additional surveys to determine significance and mitigate impacts to less than significant levels. The commentor is directed to Response to Comment A7-2 and Response to Comment A7-5 addressing recent survey findings and impact analyses. Translocation of plant species is no longer proposed as mitigation and will not be required. The commentor is further directed to the supplemental evaluation contained within Appendix Q for a project-specific analysis of the preferred project.

Response to Comment A7-21

This comment states that alternative project components should be required as conditions of approval, namely, water conservation measures and other measures to mitigate saltwater intrusion.

See Topical Response 2, Project Costs, addressing water resources and the project scope, and Topical Response 9, Water Conservation Measures, addressing water conservation measures.

Response to Comment A7-22

This comment expresses a concern regarding seawater intrusion impacts from the project, and includes the opinion that the County should expand the scope of the project to address seawater intrusion impacts beyond those caused by the project. Draft EIR Section 5.2, Groundwater Resources, together with Appendix D, clearly describe the magnitude of the project's seawater intrusion impact together with the measures that will fully mitigate this impact. Regarding the scope of the project relative to the overall seawater intrusion issue. The commentor is directed to Response to Comment A3-3, Topical Response 3, Water Resources and the Project Scope, addressing saltwater intrusion, water resources, and the project scope, as well as Topical Response 9, Water Conservation Measures.

Response to Comment A7-23

This comment reiterates that the commentor does not support a number of the mitigation measures, and states that the County will need to secure authorization of "take" for species listed under CESA, and will need to notify CDFG for impacts to wetlands, streams, and riparian resources regulated under Section 1600 et seq of the California Fish and Game Code. Modifications to mitigation measures, where applicable and required, have been made based on the comments provided. No impacts are anticipated to any state-listed species therefore the County would not need to secure 'take" authorization. Impacts to wetlands, streams, and riparian resources regulated under Section 1600 et seq of the California Fish and Game Code will be determined through the project's application for a Streambed Alteration Agreement, as proposed within Mitigation Measure 5.5-C3.

LOCAC

Los Osos Community Advisory Council

January 30, 2009

Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Dept of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

Re: LOCAC Comments on LOWWP DEIR

Dear Mark:

Members of the Los Osos Community Advisory Council (LOCAC) and the people of Los Osos who have participated in the LOCAC review of the draft environmental impact report (DEIR) for the Los Osos Wastewater Project (LOWWP) thank you for the opportunity to comment on the sufficiency of this document as we and the County prepare to select the best and affordable wastewater project for Los Osos.

Even though LOCAC had not formally reviewed the previous wastewater projects because they were not officially county land use projects, the members of LOCAC back in 1995 felt so strongly about the sustainability of the Los Osos water basin that they devoted a complete section of the 1995 LOCAC vision statement to the holistic management of water including (but not limited to):

- ***waste water treatment facility(s) based on a natural biological process rather than mechanical system approach to the highest extent possible,***
- ***graywater reclamation, management and recycling, and***
- ***development of a water supply for agricultural or irrigation purposes***.

Now that the LOWWP is a county project, and since LOCAC is the forum for public review of all discretionary and county land use projects, it is appropriate that LOCAC be involved in the review process at each step. We heard from the County many times during the technical review process that to wait for the EIR before coming to conclusions about which technology and project would be best for Los Osos. The people of Los Osos were promised that the EIR document would provide the answers to the recurring questions of how the various alternatives would meet the objectives of the project. Therefore, LOCAC undertook the formation of an ad hoc committee to review the draft LOWWP EIR and assist the public in reviewing and responding to this document. In formulating our questions and voicing our concerns, we felt it was important keep in mind the 1995 LOCAC vision and the realities of the events of the last 13 years, including the failed sewer project in 2005 and the declaration of a Water Severity Level III condition in Los Osos that resulted from serious seawater intrusion in the lower aquifer,

The LOCAC DEIR committee included members of LOCAC and the public. They met at least one evening each week, even through the busy holiday periods, to review and discuss the DEIR. This was a tremendously difficult and laborious task for this study group, since most of the participants have had little or no experience in formally reviewing and submitting comments on a DEIR. Fortunately, a few committee members who have credentials in soil science, engineering, water resources, air quality, traffic assessment, or experience in reviewing environmental documents were able to provide general guidance and assistance with the formulation of the detail comments included in this packet. I would personally like to thank all the people who have contributed to the summary and section comments that follow. LOCAC reviewed and approved

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the submission of these comments and questions on the LOWWP DEIR at a special meeting held on January 27, 2007.

LOCAC and the people of Los Osos sincerely request that you and other county officials and interested parties thoroughly review and seriously consider the comments and concerns of LOCAC on this LOWWP DEIR. We understand that this committee's questions by no means exhaust all the concerns of the public, and we have encouraged many people to submit their specific comments to you separately. In response to our report, our expectation for this document is that you will:

- clarify areas where the explanation of a topic is unclear, incomplete, or missing the references to other sections or appendices when these offer better documentation of the issue;
- specify assumptions used for the alternatives and recommendations when they are not stated;
- provide answers to our specific questions; and
- perform additional analysis or provide reference to existing analysis of areas where the content presented in the section does not explain the County's decisions.

We look forward to a complete review of and electronic response to the issues raised in the summary and detailed discussion on DEIR sections and appendices that follow.

I believe that everyone in the community of Los Osos would like to see a successful, affordable, and sustainable wastewater system here. We look forward to the community survey that will be coming soon. Hopefully, we'll understand the alternatives more fully and can express our preferences more intelligently after receiving your answers and response to our comments on the DEIR. Thank you.

Sincerely,

Carole Maurer, LOCAC Chairperson

CC via e-mail:
SLO County Supervisors: Mecham, Gibson, Hill, Achajdian, Patterson (via Susan Baker)
U.S. Representative Lois Capps
State Assemblyman Sam Blakeslee
State Senator Abel Maldonado
SLO County Staff: Paavo Ogren, John Waddell
SWQCB, Board of Directors and Staff
RWQCB, Board of Directors and Staff
California Coastal Commission, Central Coast
CA Department of Fish and Game
CA Office of Planning and Research
National Water Research Institute, Dr. George Tchobanoglous
Morro Bay National Estuary Program
Ripley Pacific Team, Dana Ripley, Bahman Sheikh
LOCAC members: Dellagatta, Leslie, Malykont, Milledge, Owen, Parker, Perlman, Rohn, Swanson, Whitney
Andrew Christie (Sierra Club), Ken Haggard (SLO Green Build), Sara Corbin (Surfrider),
Northern Chumash Tribal Council
The Tribune
The Bay News
The New Times

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Comments on the Draft EIR for the Los Osos Wastewater Project

Submitted by

Los Osos Community Advisory Council
(LOCAC)

January 30, 2009

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SUMMARY OF KEY CONCERNS ON THE DRAFT EIR OF THE LOWWP

In accord with the goals and values previously endorsed by the County in the Fine Screen Report and by the Technical Advisory Committee, the Los Osos Community Advisory Council (LOCAC) affirms the core values of Sustainability and Affordability for the Los Osos Wastewater Project (LOWWP).

The sustainability of a project is based on the tri-metric foundations of Environmental, Economic, and Social sustainability, where a wastewater project would first do no harm, and would ensure that future generations are protected from the negative impacts of our choices today. Therefore, we believe that **water and wastewater solutions are inextricably related, and that the *primary* goal of the LOWWP should be to restore and protect the Los Osos groundwater basin** and other environmental resources as a whole.

This priority is affirmed and mandated by State legislation (Porter-Cologne Act), which says, *"The State must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation."* Seawater intrusion poses a much greater threat to basin degradation than nitrate pollution. Furthermore, according to AB2701, the County has authority and responsibility to approach water and wastewater from a basin-wide perspective and to address basin balance. The way that treated effluent from the LOWWP is used will impact the balance of the basin – one way or the other – as well as water quality. **If the project's reuse and/or disposal of treated effluent *does not contribute* to balancing the basin, then the project *exacerbates* the problem of seawater intrusion (SWI), which poses an even greater risk to the basin.**

The National Water Research Institute panel endorsed the following goals in their reviews of both the Update of 2006 and the DEIR technical memoranda in 2008, as stated by the Appropriate Technologies in the Key Environmental Impacts Statement* for a sustainable project, stating that the LOWWP shall:

1) *Provide greatest protection against overflows and other releases of partially or untreated wastewater from the system, which could pollute Morro Bay and other sensitive coastal ecosystems.*
2) *Provide the greatest possible protection to groundwater of the Los Osos Basin.*
3) *Avoid environmental impacts relating to construction and installation to the greatest extent possible, including impacts of open trenching (e.g. dewatering, soil stabilization, street reconstruction).*
4) *Avoid impacts to Native American Chumash sites.*
5) *Provide the most energy-efficient solution and enable the use of clean, renewable energy sources, avoiding environmental impacts (i.e., greenhouse gas emissions).*

*KEI Statement was produced by the Appropriate Technologies Coalition, including SLO Green Build, Sierra Club, Surfrider, and endorsed by Terra Foundation, Los Osos Sustainability Group, and Northern Chumash Tribal Council.

LOCAC's key concerns with the DEIR and the proposed LOWWP are briefly summarized below. They do not necessarily appear in any order of importance. For most of these concerns, there is a reference to the sections of the LOCAC report that follow this summary. Each section includes detailed discussions, sources of information, and specific questions and issues we wish to be addressed.

- **Project goals and selection criteria**:
  1. We believe that the primary objective of the project should be protection of the groundwater quality and supply, not compliance with regulations. The Fine Screen Report recognized basin management and seawater intrusion mitigation as the highest priority and benchmark in measuring the success of the project, but the DEIR relegates this to secondary importance behind that of regulatory compliance. A8-1

Compliance with regulatory concerns is necessary but secondary to an Environmental Impact Review. (Project Description - B, Groundwater - D) A8-1 CONT

2. The DEIR fails to recognize the project in the context of groundwater basin management. This affects assumptions on effluent reuse alternatives, conservation and surface waters quality, and the arbitrary demarcation of the Prohibition Zone (PZ). The project should contribute to Groundwater Basin Management. It must *not* have a negative impact on the Los Osos groundwater basin or the future water supply for Los Osos, particularly relating to seawater intrusion. Furthermore, imported water is not an option for the future: it will be unaffordable and most likely unavailable. (Groundwater - D) A8-2

- **Affordability: Economic and social impacts to community**

3. In order to be economically and socially sustainable, project selection must take into consideration the cost impacts relating to both capital costs and annual operations and maintenance costs, as well as the impact of financing. Given the median household income (MHI) for Los Osos of $46,558 (2000 census), a sewer bill of $200-$250 a month represents 6.44% of total income. However, this MHI includes many higher income residents who live in Los Osos but outside the (PZ), while residents in the PZ include many lower income families and seniors on fixed income, so the economic impact will be even greater. It is estimated that between 30 and 36% of the population of Los Osos will be displaced (forced to move) because they cannot afford this sewer bill. In addition, homeowners will have to pay as much as $10,000 to decommission their existing septic tank, construct a lateral connection to the collection main, and restore the landscape and hardscape of their yards. A8-3

   The DEIR neglects to discuss this critical impact of the project, indicating that this EIR document is intended to address environmental impacts only. However, other EIRs have chosen to include economic impacts; in fact, the 1987 EIR for the LOWWP gave a whole chapter to this area.

4. The DEIR also fails to address the economic impact to local small businesses due to sewer assessment and monthly costs. These are likely to result in a change to the charm and character and small town atmosphere of Los Osos due to the failure of small businesses to survive and the eventual arrival of larger chain stores. A8-4

5. The DEIR fails to disclose potential hidden or delayed costs of the project, such as harvest wells for Broderson. A8-5

- **Assumptions and use of out-dated sources of information**

6. The DEIR uses out-dated reports and information, including reliance on old population data (1990 census). We believe that these numbers are exaggerated and will lead to the design of a larger capacity sewer system and greater cost than is warranted for the population of the prohibition zone. The sizing of the sewer facilities should be based on 2000 census data and the county's projected growth rates for Los Osos and current reports for water usage. (Project Description - B) A8-6

7. The DEIR relies on information from past studies, rather than conducting updated studies employing recent technologies. For instance, it appears that no recent tests have been conducted to determine any change in nitrate levels in the upper aquifer since the building moratorium. (Project Description - B) A8-7

8. Underestimating the impact from the loss of septic system discharge could potentially result in irreparable damage to the basin if Broderson fails to recharge as projected. (Geology - F) A8-8

9. The DEIR fails to consider loss of habitat associated with residential leach fields when septic discharge is eliminated. (Biological - G) A8-9

10. The DEIR fails to analyze aggressive conservation strategies and potential impacts on the groundwater basin and seawater intrusion mitigation. (Groundwater - D) A8-10 CONT

- **Collection Systems**

11. The collection component of a wastewater system has the highest potential to affect cost, ground water quality, safety objectives for Morro Bay, operation and maintenance, installation time, and lifecycle costs. The DEIR fails to explain why alternative collection technologies were ruled out. In light of information recently made public, we urge the county to fully analyze and cost a small-pipe, sealed collection system utilizing dedicated low pressure and/or vacuum technologies. (Project Description - B) A8-11

12. The DEIR fails to fully analyze the varying life cycles and replacement costs for gravity and STEP systems. (Project Description - B) A8-12

13. The DEIR fails to make clear the impacts of Inflow and Infiltration (I/I) in a gravity (unsealed) collection system on groundwater and the increased load on the treatment plant. It also fails to address the impact of a gravity system's inevitable exfiltration on groundwater, as well as risks associated with seismic events. (Groundwater - D, Project Description - B) A8-13

14. The DEIR fails to fully analyze the impacts on roads from deeper trenching required for gravity collection mains. Due to the sandy soils of Los Osos, it has been estimated that roads restored after construction would buckle later after settling. (Geology - F) A8-14

15. The DEIR fails to make clear the impact on traffic, noise, and air quality from the longer construction time for gravity collection system. (Traffic - J, Noise - L, Air Quality - K) A8-15

- **Treatment Plant Site**

16. The DEIR fails to fully analyze impacts of Tonini as the site for treatment and/or disposal (throughout). A8-16

17. Tonini has a higher rated soil (Class II) than Giacomazzi/ Branin (Class III). (Land Use - C) A8-17

18. Use of Tonini results in the greatest loss of agricultural acreage, compared to Giacomazzi/ Branin. (Ag – M, Fine Screen, Section 6.3) A8-18

19. Applying effluent that has only received secondary treatment to Tonini spray fields may render this prime agricultural land unusable for crops for generations. (Groundwater – D, Ag - M) A8-19

20. We strongly recommend the use of conservation easements along the pipeline from town to the treatment plant to protect against potential growth inducement. (Growth Inducing Impacts - 6) A8-20

- **Treatment Technologies:**

21. Tertiary treatment is required for agricultural and urban reuse. Moreover, the trend for health standards and regulations to become more stringent is evident. Therefore, we believe that tertiary treatment should be designed, costed, and constructed from the beginning to allow for the greatest selection of beneficial reuse. (Groundwater - D) A8-21

22. Assuming opportunity for urban reuse, any treated effluent conveyance system ('purple pipe") cannot mix secondary and tertiary-treated effluent without degrading the entire stream. The DEIR fails to analyze the implications of a shared purple pipe for Broderson and urban reuse when effluent is only treated to secondary levels for Broderson. (Groundwater – D) A8-22

- **Effluent Reuse and Disposal issues:**

23. Tonini spray fields represent a permanent loss of water to the basin and contribute to the serious risk of needing imported water. The use of spray fields should only be considered as a temporary, short-term, emergency alternative of disposal for treated effluent. (Project Description - B, Groundwater - D) A8-23

24. The DEIR fails to fully analyze and discuss Agricultural and Urban Reuse as alternatives that meet project objectives of protecting water quality and replenishing the aquifer. It is **cheaper** (both capital costs and annual O&M), **smarter** (from a SWI mitigation standpoint), and **safer** to pursue agricultural and urban reuse *NOW* and minimize the need for spray fields. A8-24

25. Based on independent expert opinion, we believe that Broderson's ability to recharge the upper and lower aquifer is questionable, and that application at Broderson poses the serious risks of liquefaction and landslide. If Broderson fails, we have underestimated the irreparable harm that will occur when current septic system discharge flows are removed from the basin to spray fields. (Geology - F) A8-25

26. The project must not risk jeopardizing the quality of the Los Osos aquifer and groundwater through discharge of effluent treated only to secondary levels. Any discharge at Broderson must comply with Department of Health Services requirements for discharge into a potable water supply. (Groundwater - D) A8-26

27. In the DEIR's consideration of using Broderson for recharge, it fails to consider the increasing issue of emerging contaminants. If Broderson is used, potential costs relating to reverse osmosis must be addressed. (Groundwater - D) A8-27

28. The DEIR fails to fully analyze the impacts associated with risk of liquefaction and landslide at Broderson. (Geology - F) A8-28

29. The DEIR fails to adequately address the impacts on noise, traffic and air quality when the Broderson leach fields are re-constructed every 5 to 10 years. (Noise – L, Traffic – J, Air Quality – K) A8-29

30. The DEIR fails to disclose the impacts and potentially delayed costs relating to discharge at Broderson, such as harvest wells, reverse osmosis, and fines relating to potential liquefaction and landslide. A8-30

- **Conservation**

31. One of the only sure ways to reduce pumping from the aquifers is conservation. We believe that alternative conservation strategies must be fully explored and aggressively implemented as part of the wastewater project. This will require the leadership and cooperation of the County, the CSD, the water purveyors, and members of the community. (Project Description - B) A8-31

- **Drainage and Surface Water Quality**

32. We strongly recommend that the county consider storm water as a resource, and request that they analyze alternative methods of controlling and utilizing drainage and runoff. We urge the county to analyze Low Impact Development (LID) strategies to enhance storm management and rainwater harvesting. LID components also offer the potential for many grants to help reduce overall costs. (Drainage - E) A8-32

- **Air Quality and Energy Footprint**

33. The DEIR fails to explore "green" alternatives for renewable energy, ecological treatment technologies, and environmentally responsible sludge handling. Given the "green" goals of the forthcoming stimulus package, it behooves us to pursue these alternatives from the beginning. (Air Quality - K) A8-33

- **Septage Receiving Station**

LOCAC DEIR REVIEW

34. The DEIR assumes that a septage receiving station will be constructed, regardless of the project selected. In the associated technical memorandum, it was concluded that a septage receiving station is unnecessary, costly, and will never pay for itself. Furthermore, it promotes the possibility of Tonini becoming a regional sludge handling center. (Project Description - B)

A8-34

In summary, we strongly urge the county to employ strategies and technologies that *eliminate* potential environmental impacts, rather than simply mitigate them. We endorse and urge the County to consider our concerns and adopt the goals for the LOWWP as stated by the Sierra Club (Santa Lucian, January 2009):

> ***We want a project in which treated wastewater is a resource to be utilized, not a pollutant to be disposed of;***
>
> ***Where water demand and use is reduced;***
>
> ***Where an aquifer is recharged and protected against saltwater intrusion;***
>
> ***And where minimal sludge is created for disposal.***

LOCAC DEIR REVIEW

PROJECT DESCRIPTION
DEIR Section 3 and Appendix B

SUMMARY

The County promised the people of Los Osos that the EIR document would provide answers to the recurring questions of how the various alternatives would meet the objectives of the project and how and why each proposed project component was selected over others that were reviewed in earlier phases. They were expecting somewhere in this EIR report not just the detailed technical analysis but also a complete explanation in simple language. The public waited a long time for the DEIR to be published. One would expect that the Project Description section of the DEIR would be what the general, non-technical public should read to understand how and why the County came up with the proposed four projects as the environmentally preferred options over other combinations of collection, treatment and disposal. Unfortunately, after reading this section, one still doesn't understand how or why the proposed projects meet the project objectives whereas alternative components do not.

The main issues with this section are:

- The primary objective of the project as described in this document should be protection of the groundwater quality and supply, not compliance with regulations, which, in itself is not specifically an environmental consideration.
- Population data for Los Osos is exaggerated because of old census figures, potentially resulting in overstated flows and loads and over sizing the treatment plant.
- A definition of project life-cycle from which to compare environmental impacts and overall project costs of the various project alternatives is missing.
- A discussion of all discharge and reuse alternatives that meet project objectives of protecting water quality and replenishing the aquifer is missing.

DISCUSSION, INCLUDING QUESTIONS TO BE ADDRESSED

3.1 Project Objectives (pp. 3-1 to 3-9 of draft EIR)

1. Why isn't reducing seawater intrusion a primary objective for the current project?

The description of the project history and background information has not been updated to the present time. The most glaring omission is that there is no discussion of the seawater intrusion into the lower aquifer and the impact that this has and will have on the Los Osos water basin. This is the most important water-related issue in Los Osos, even more so than the nitrate issue. Although this was known to be occurring prior to the last sewer project, it wasn't until last year (2008) that the Board of Supervisors certified a Level III severity. This is such a serious situation that balancing the water basin by reducing seawater intrusion into the aquifer should be one of the primary objectives of this project, not a secondary objective. A8-35

2. What constitutes a successful project in terms of nitrate reduction?

If one of the objectives of the project is the reduction of nitrates in the groundwater, then there should be some mention in this overview of whether the nitrate problem has increased, decreased, or stabilized during the prohibition period, or if the building moratorium and current steps to mitigate the problem have improved the situation. In other words, there should be some mention of what would constitute a successful project in terms of the quality of the groundwater. A8-36

3. Where is explanation of why Prohibition Zone is targeted for collection and treatment and not entire Los Osos? A8-37

The project background doesn't explain why the project covers only the prohibition zone and not the entire Los Osos community, since eventually all most likely will be using the facilities. **How will the project be configured so that there isn't an unfair assessment on the PZ?** This is a question nearly everyone asks and it should be explained here. A8-37 CONT

4. What percentage of the population and housing figures should be used for the Prohibition Zone?
The concept of buildout, including the population and number of dwellings that this represents, is not explained. The description should include the percentage of Los Osos that is covered by the prohibition zone (PZ) and outside the prohibition zone – now and at buildout, if they will be different. It's difficult when looking at the tables throughout the DEIR to tell if the data refers to only the PZ or to all of Los Osos. Some people say that the PZ percentage is 87% of the total population, but not all tables in DEIR agree with that. A8-38

5. What is the definition of project life-cycle?
A secondary objective of the project is to minimize life-cycle costs and affordability impacts to residents. However, the project description does not indicate how far into the future this project and its associated costs and environmental impact are supposed to cover. In other words, what is the expected life of this project – does it differ depending on alternatives chosen? At what point in the project life-cycle must elements be replaced and/or project restarted or redone? This will be very important when looking at relative costs of project alternatives. Since there's no mention of what year projected buildout is supposed to occur, it isn't clear that buildout will occur within life of this sewer project. How can this EIR be evaluated for the preferred project without costs being reasonably estimated for the life of the project? A8-39

6. Why is there no discussion of tertiary treatment and reuse?
There should be an explanation of the meaning of the effluent and recycled water limitations that are referred to in Table 3-1: Effluent and Recycled Water Limitations. What is meant by treated effluent – into or out of what? And by recycled water – secondary or tertiary? This whole section is not clear and inadequate as discharge objectives. There should be some mention of acceptable discharge alternatives here that meet project objectives of replenishing the aquifer, including purple pipe, etc. Would that not be tertiary treatment? A8-40

3.2 Project Location (pp. 3-9 to 3-19)

7. Explanations of terms and project sites are confusing.
General comments in this section are not clear, especially discussion of project components in and out of Wastewater Service Area. The term project site has a different meaning depending on which aspect of the project is being referred to. Introducing the four projects here without explanation is confusing – should have just described characteristics of each setting evaluated for each aspect without mentioning proposed projects yet: collection (dwellings to be collected), conveyance (streets, right of way, etc.), pump station sites, treatment plant sites (may vary depending on treatment option), disposal conveyance, disposal sites. A8-41

8. Why is the Mid-town site needed if alternative disposal methods are used?
The DEIR assumes that Broderson will be used for disposal for all project alternatives. Another collection site could be used if alternate disposal methods are chosen, such as purple pipe or other reuse. There is no mention of any other central collection site closer to the project treatment site – why not closer to South Bay Blvd., assuming treatment plant is outside of town? A8-42

9. Why is the Mid-town site needed for STEP collection? A8-43

Another collection site could be used if the STEP collection system is chosen, since the central pump station is not necessary. There is no mention of any other central collection site closer to the project treatment site – why not closer to South Bay Blvd., assuming treatment plant is outside of town? A8-43 CONT

3.3 Project Characteristics (pp. 3-19 to 3-67)

10. Why are the 1990 census figures used instead of 2000 and the updated population data from the County? How can the flows and loads and sizing of the facilities be justified with exaggerated population figures?

The population figures that are used in the entire DEIR do not represent the current data supplied by the county. The 2000 census data, not 1990 that is mentioned in this section, indicates that the current population is 14351 (current housing study says 14277 – don't know why data isn't exactly the same). Over the past 5 years, there have been many studies and projections made about the lack of growth in population in the Estero Area and particularly Los Osos, due to the building moratorium and the potential water shortage. For the past few years, the growth rate has been about 1%. The flows and loads figures that are used in the DEIR are exaggerated because the current and projected population figures are too high. The Estero Area Update for Los Osos (which hasn't been approved yet) shows the buildout population for all of Los Osos to be 19713. One of the reasons that this plan hasn't been adopted yet for Los Osos is because there was a question about even this buildout figure being too high, given the water situation. The most recent San Luis Obispo County Population study (July 2008, per Morgan Torell) shows the population of Los Osos by 2030 at only 18670 .This is a far cry from the 28688 buildout population figure in Table 6-2 of the DEIR. A8-44

11. Why weren't all viable alternatives included in the description of each element?

This section should include a summary of all viable alternatives for each project aspect (collection, conveyance, treatment, disposal, onsite, etc.) and a brief explanation of why or why not they aren't considered further in the document, as described fully in the alternatives section (assuming these are fully addressed there). **Where is the rationale for the County assumptions that all four proposed projects require mid-town collection, use of Broderson, and the Tonini site in order to meet project objectives?** A8-45

12. Why does the section on costs and funding include only the project alternatives chosen rather than all the alternatives presented during the rough and fine screening processes? Does this mean that no other options are possible?

The public has waited a long time to see true cost estimates for all project alternatives, not just the four preferred projects as described. Two of the alternative collection technologies, low pressure and vacuum systems, are not described, although the community had asked that they be analyzed and compared as they believe that they are more cost effective when looking at the project as a whole. A8-46

13. Where is the description of project life-cycle? Does the definition of life-cycle differ by technology?

One of the objectives of this project is to minimize life-cycle costs. Without a clear life-cycle definition, the O&M costs can not be accepted as presented. At some point, maintenance or replacement must occur for many components. A8-47

3.4 Intended uses of DEIR (pp. 3-67 to 3-79)

14. Where is the comment that the public will use this DEIR to assist in survey?

The DEIR has been promised for months as the public's answer to most sewer questions in order to respond to the County's survey on viable alternatives. Where is mention of the public's use of this DEIR to assist in their decision about preferred project elements? The public's use of this document for this purpose isn't included here. A8-48

LOCAC DEIR REVIEW

LAND USE
DEIR Section 5.1 and Appendix C

SUMMARY

There are County General Plan and Coastal Land Use policies that discourage loss of agricultural land. The proposed revisions to the Conservation and Open Space Element continue to reinforce the necessity to conserve and protect open space and prime agricultural land. However, the justification for the proposed use will most likely be covered by a "Statement of Overriding Consideration" which can be crafted based on the explicit need for a public waste water treatment facility.

DISCUSSION

The Tonini site was not considered during the initial Fine Screening reports. The DEIR is not clear at what point it was proposed, however, clearly the potential threat of a lawsuit by property owners in the outlying areas and the cemetery would be reason enough for the County to look for another site. However it was decided, the DEIR does evaluate the potential impacts associated with this site and concludes, however narrowly, that this is the preferred location.

Tonini is 650 acres, with 175 acres proposed for removal from the Agricultural Zoning designation. The proposed treatment area is 32 acres. Under the permitted uses of the Agricultural Zone, public utilities and related facilities are allowed uses. To minimize the loss of prime agricultural land, the DEIR proposes mitigation that would designate equal agricultural land nearby to a perpetual conservation easement, through some means such as an easement or deed to the County. This would be permanent conservation of equivalent land. Other mitigation is very typical: buffer zones and fencing to control livestock.

Regarding impacts associated with Land Use, the DEIR finds that there are no impediments because the zoning allows consideration of utilities and there are no other feasible sites for sprayfields and this site is better suited than other sites in the area. Clearly, this is not true because three other sites were analyzed. In fact, it may be preferred to use the Giacomazzi site because it has allowed grazing on soils of less prime importance. A8-49

Waste water treated to a secondary level can be used on sprayfields where no edible foods are grown. Tertiary treatment is needed for irrigation of crops. It is not likely that tertiary treatment will occur because it costs more money. The DEIR argument that it "would take a number of years to develop a relationship with growers to begin using treated effluent for crops" is probably not true as evidenced by the growing need for an adequate water supply. A8-50

ISSUES

1. **Is the recharge to both aquifers enough to allow full buildout to Los Osos?**
   The DEIR does not address the full recharge to both aquifers in any meaningful way. It would appear that there are "expectations" by property owners within the Prohibition Zone, that the approval and development of the Waste Water Project will ensure building permits. There needs to be an adequate discussion of this because the DEIR is misleading. A8-51

2. **How is the proposed project in conformance with the General Plan/Estero Area Plan if the DEIR does not discuss this potential need for a future water expansion project?** A8-52

Should the WWP not provide enough ground water recharge for full build out, then it would necessarily lead to a conclusion that another, future water improvement/capacity project would be in the works. A8-52 CONT

3. **Would the County agree that referencing the General Plan Build Out number in the DEIR alludes to the ability to have full build out?** A8-53

4. **Does the DEIR discuss when full buildout will occur? And, what quantifiable measures are proposed to predict adequate water supply to support full build-out?** Adequacy of water supply is necessary for full build-out. There is one section that mentions ***build out has some natural limitations to growth*****: habitat conservation plans and water supply**. But, this is not enough of an explanation to future growth capacity and timing. A8-54

LOCAC DEIR REVIEW

GROUNDWATER QUALITY RESOURCES
DEIR Section 5.2 and Appendix D

SUMMARY

LOCAC affirms and concurs with the **NWRI Panel and Key Environmental Impacts Statement* goals for a sustainable project, in that, the LOWWP shall:**

1) Provide greatest protection against overflows and other releases of partially or untreated wastewater from the system, which could pollute Morro Bay and other sensitive coastal ecosystems.
2) Provide the greatest possible protection to groundwater of the Los Osos Basin.
3) Avoid environmental impacts relation to construction and installation to the greatest extent possible, including impacts of open trenching (e.g. dewatering, soil stabilization, street reconstruction).
4) Avoid impacts to m\Native American Chumash sites.
5) Provide the most energy-efficient solution and enable the use of clean, renewable energy sources, avoiding environmental impacts (GHG emissions).

*KEI Statement was produced by the Appropriate Technologies Coalition, including SLO Green Build, Sierra Club, Surfrider, and endorsed by Terra Foundation, Los Osos Sustainability Group, and Northern Chumash Tribal Council.

LARGEST CONCERNS RELATING TO GROUNDWATER QUALITY RESOURCES:

1. **The LOWWP must *not* have a negative impact on the LO groundwater basin or the future water supply for Los Osos, particularly relating to seawater intrusion.**
2. **The LOWWP must not risk jeopardizing the quality of the LO aquifer and groundwater.**
3. **The LOWWP plan for reuse and disposal must contribute to the basin management plan and ensure that there will be no need for imported water in the future. Squandering our groundwater basin violates recent State legislation. Furthermore, a desalination plant and imported water are unaffordable, while imported water will likely be unavailable.**

ANALYSIS:

I. Aquifer Balance and Seawater Intrusion:

A. The DEIR appears to underestimate septic return flows and the potentially negative impacts of removing them from the hydrologic (recharge) cycles of the basin. This could lead to the project potentially increasing seawater intrusion.

The DEIR states 957 AFY of septic flows will be eliminated with the project, of which about 600 AFY are recharging the upper aquifer. However, 957 AFY represent the septic flows with the project's conservation element in place (160 AFY) (see Table 5, Appendix 2-D, DEIR). The conservation element will not be in effect until project start-up. Therefore, a reasonable estimate of total septic flows eliminated with the project is between 1100 and 1200 AFY. A8-55

Of this about 900 AFY leaks to the upper aquifer as recharge; however, the DEIR states that only about 600 AFY recharges the upper aquifer (Table 8, Appendix D-2, etc.). According to the DEIR, the current sources

of recharge to upper aquifer (Zone C) include: rainwater percolation and irrigation (1489 AFY), septic return flows (606 AFY), subsurface inflow (112 AFY), and/or subsurface cross flow (788 AFY) (Table 8, Appendix D-2)—but the last category of recharge is from the perched aquifer, and the perched aquifer is 46% septic flows (631 AFY of 736 AFY). Therefore, 46% of 788 AFY, or 362 AFY of additional septic flows, contribute to upper aquifer recharge, or about 900 AFY total.

Tables 9 & 10, Appendix D-2, show conditions after the project is installed (with reuse/disposal Projects 2a and 2b in place). These tables reflect only 69 AFY less recharge to the upper aquifer from the perched aquifer with project implementation, instead of about 300 AFY less. The largest reduction resulting from removing septic flows from the perched aquifer is flow to Willow Creek (down by 517 AFY). The DEIR does not explain why removing septic flows from the perched aquifer would impact Willow Creek by 90% and the upper aquifer by less than 10%--and the finding on its face is illogical. It is more reasonable to assume that the removal of septic flows will impact both receiving sites equally. When referring to the flow pathways of water in the perched layer, the Yates and Williams study states, "Nitrogen associated with recharge in zones overlying the perching clay was allocated to the four pathways (leakage to lower levels, lateral receiving zones, transpiration, and Willow Creek) in the same proportions as flow" (p. 9). The study points out that the only losses to the groundwater flow system were the last two categories, transpiration and flow to Willow Creek. Therefore, recharge to the upper aquifer will likely be reduced by about 300 AFY more than presented in the DEIR, requiring greater mitigations than Broderson leach fields provide, in order to avoid negative impacts to the basin. A8-55 CONT

Removing a total about 900 AFY of septic flows (600 AFY plus 300 AFY) from upper aquifer recharge throws the upper aquifer out of balance, as shown by Tables 9 & 10. The significant additional reduction to upper aquifer inflow would mean one of the following occurs: 1) the upper aquifer is in overdraft (subjecting the aquifer to possible seawater intrusion), 2) less water leaks to the lower aquifer from the upper (causing increased seawater intrusion), and/or 3) even less subsurface freshwater flows from the upper aquifer to support the estuary (i.e., maintain the fresh-seawater interface) According to Tables 9 & 10, about 141 AFY less subsurface outflow will occur, with Projects 2a & 2b in place and Broderson recharge assumed to be 448 AFY. This does not count additional 300 AFY of reductions noted above. With those reductions, outflows would be reduced even more.

For all three systems (the upper aquifer, the lower aquifer, and aquatic ecosystems) the impacts would undoubtedly be significant. Thus, the DEIR should analyze a range of alternatives to avoid or mitigate for the potential impacts of removing septic return flows from the hydrological cycle, along with an analysis of their mitigations and feasibility. (See "Alternatives to Broderson" below for possible alternatives.)

II. Broderson Leach Fields

A. The safety, recharge effectiveness, and beneficial impacts of Broderson leach fields on seawater intrusion are uncertain. CEQA case law has established that where there is uncertainty, the EIR should acknowledge uncertainty and discuss alternatives and mitigations. The following are some of the uncertainties:

1. The DEIR assumes and states with certainty that 100% of the discharge applied at Broderson will recharge upper aquifer, and 22% will recharge the lower aquifer. Based on this assumption, the DEIR claims that the project will fully mitigate for the removal of septic flows. This assumption is based on scientific modeling and analysis with substantial margins of error (e.g., steady state models often with more than 10% standard deviation). It is possible Broderson leach fields will not recharge the upper aquifer, the lower aquifer, nor support sensitive ecosystems at all, contrary to claims in the DEIR (e.g., p. 5.2-19). The Yates & Williams study in 2003 indicated that water tables in the upper-most water A8-56

layer (the perched aquifer) would drop 10 feet, in some areas drying up altogether (p. 18). The 2005 Draft Water Management Plan recommended 560 AFY of imported water as "a placeholder for mitigating sea water intrusion," even though the prior project called for Broderson to recharge even more water than the current project, and it called for testing the upper aquifer water "to determine the actual production and water quality constraints on upper aquifer use for potable supply" (p. 10). Due to the uncertainties of Broderson, County staff (e.g., Paavo Ogren, the Public Works Director) have indicated the County will begin discharging water to Broderson leach fields at less than 448 AFY, slowly increasing discharge to 448 AFY. In the meantime, more effluent would be applied to spray fields at Tonini than planned for Project 2b, and the upper aquifer would be in overdraft, according to estimates in the DEIR (e.g., Tables 9 & 10, Appendix D-2). (Note: Slow start up of Broderson leach fields would make the potential overdraft and negative impacts of the project even more significant than stated in "I" of this analysis.)

2. The DEIR asserts that Broderson leach fields will percolate recycled water safely at a rate of 448 AFY, without causing liquefaction or slides (damaging homes) and without causing water to surface downhill from the site (causing harm to property or sensitive ecosystems). At least two authorities, Larry Raio and Dr. Tom Ruehr, have contradicted these claims (see Geology discussion in this report). The DEIR should acknowledge the uncertain benefits and potential negative impacts of Broderson and include more thorough analysis of alternatives, mitigations, and the feasibility of alternatives and mitigations that address these uncertainties. A8-56 CONT

3. The DEIR states that the water discharged at Broderson leach fields will have to meet the standards set for the last project, i.e., the Waste Discharge Requirement (WDR) for the project (p;. 3-8 & 3-9). This is uncertain. In fact, the California Department of Public Health (CDPH), which sets standards for water recharged in aquifers, is recommending stricter standards. The WDR must concur with CDPH standards, so the requirements for the LOWWP are likely to be more stringent. The NWRI states: "If the Broderson site is used for effluent disposal, it is important to evaluate compliance with the new DHS Groundwater Recharge Reuse criteria (because there is no vadose zone and there would be intentional recharge to the upper aquifer, which has historically been used for potable supply." (NWRI report on the LOWWP in 2006, Section 3.5.3)

B. Alternatives to Broderson: If the Broderson leach fields don't perform as the DEIR indicates or treatment requirement for the recycled water proves to be cost prohibitive, there is little flexibility with Project 2b (the preferred alternative in the DEIR) to avoid significant negative impacts on the basin. The following are some alternatives that should be analyzed:

1. Higher levels of conservation than currently called for (e.g., a 25% reduction in indoor use is achievable according to authorities (e.g., Gleick et al. in *Waste Not Want Not*, 2003). A similar or greater reduction in outdoor use is possible. Both might possibly be implemented via ordinances, similar to the conservation ordinance approved by the LOCSD prior to the last project. A8-57

2. Agricultural exchange, graywater reuse, rainwater harvesting, and urban reuse. Like conservation, these reduce pumping of the aquifers, so they are the most certain and rapid ways to stop seawater intrusion).

Note: The county maintains that contracts with farmers would take a long time. However, attractive water exchange rates, along with the other benefits farmers receive, e.g., reduced expenses for nitrate fertilizer use, reduced energy use for pumping groundwater (90% of the energy use for farmers), and compliance with RWQCB nitrate management requirements) make successful negotiations likely. The County further maintains that it cannot implement measures that achieve greater levels of mitigation than the currently

proposed Projects 2a-2c. However, it is responsible for fully and safely mitigating for the project. Furthermore, AB 2701, which authorizes the County to build the project, also authorizes the county to address basin balance and seawater intrusion related to the project**.** Pursuing these options now saves capital and O&M costs, as well as duplicated costs (since they will need to be done later), and they will help ensure adequate mitigation for the project's potentially negative impacts on basin water supplies, e.g., seawater intrusion. A8-57 CONT

C. Relevant findings, quotes, and laws

1. The NWRI peer review of the Ripley Pacific proposed project in 2006 and the NWRI review of the LOWWP proposed alternatives in 2008 state: "If Broderson is used, it is important to evaluate regulatory compliance, particularly with regard to CA Department of Public Health groundwater recharge regulations." A8-58
2. The Santa Lucia Chapter of the Sierra Club quotes: "The DEIR contemplates only secondary treatment of effluent. The evolution of state and federal standards for wastewater treatment has been heading in only one direction – up – and it is like that tertiary treatment will be required by law by the time the LOWWP is completed." **Tertiary treatment should be designed into the project from the beginning in anticipation of increasingly stringent regulations"**

   "**No one can afford for the County to be wrong in its assessment of this key component (Broderson leach field recharge). There are serious questions surrounding the science and regulatory compliance in the selection of Broderson as a viable site for disposal of effluent and recharge of the aquifer. The Final EIR needs to provide scientific analysis confirming that Broderson can accommodate the high rate of effluent proposed, at the proposed level of treatment, and that this is the best means by which to replenish the aquifer and significantly reduce saltwater intrusion."** A8-59

3. AB 2701**:** Referring to the County's authority to implement the project, AB 2701 states: "These efforts may include programs and projects for recharging aquifers, preventing saltwater intrusion, and managing groundwater resources to the extent that they are <u>related</u> to the construction and operation of the community wastewater collection and treatment system" (emphasis added). A8-60

4. CA Department of Public Health, Drinking Water Program, draft regulations for Groundwater Recharge Reuse, dated August 5, 2008:
§60320.047. Additional Constituent Monitoring Pharmaceuticals, endocrine disruptors, and other wastewater indicator chemicals

Section 60320.045. Total Organic Carbon Requirements
(a) For each surface or subsurface application facility used for replenishing a groundwater basin, the GRRP shall monitor TOC as follows: A8-61

(1) For filtered wastewater, unless subsequently treated with reverse osmosis, two 24-hour composite samples a week, taken at least three days apart. Based on the Department's review of the previous 12 months' results, with approval from the Department, monitoring may be reduced to one 24-hour composite sample each week, and
(2) For recycled municipal wastewater, at least one 24-hour composite sample each week prior to recharge, or
(3) For surface application, at least one sample each week in a manner yielding TOC values representative of the recycled municipal wastewater TOC after infiltration and percolation, and not influenced by diluent water, native groundwater, or other source of dilution as determined by:
    (A) measuring undiluted percolating recycled municipal wastewater,
    (B) measuring diluted percolating recycled municipal wastewater and adjusting the value for the diluent water effect, or

(C) using recharge demonstration studies to develop a soil treatment factor that can be applied weekly to recycled municipal wastewater measurements leaving the treatment plant.

(b) Grab samples may be taken in lieu of the 24-hour composite samples required in subsection (a) if:

(1) the GRRP demonstrates that a grab sample is representative of the water quality throughout a 24-hour period, or

(2) the entire recycled municipal wastewater stream has been treated by reverse osmosis.

(D) A health risk assessment of the potential individual and cumulative effects of the regulated contaminants described in section 62320.030 and the constituents monitored pursuant to subsections 60320.047(a) and (c), in a manner that includes;

(1) lifetime risks of cancer and

(2) risks of non-cancer effects.

(E) A report detailing comments, questions, concerns, and conclusions of a review by an independent scientific peer review advisory panel that includes, as a minimum, a toxicologist, an epidemiologist, an engineering geologist or hydro geologist registered in California, an engineer licensed in California with at least three years of experience in wastewater treatment and public water supply, a microbiologist, and a chemist.

A8-61 CONT

5. Note that any mixing of sewer effluent with the potable water supply for Los Osos/ Baywood Park may contaminate that supply. Advanced Oxidation and RO, expensive treatment processes, would be required to reduce endocrine disruptors and other emerging contaminants to very low levels. Some of emerging contaminants (e.g., NDMA) are known carcinogens. Studies show endocrine disruptors can cause abnormalities in marine life and may cause premature secondary sexual characteristics such as early adolescence or puberty, in humans. They can also increase the chances of some types of cancer, e.g., uterine.

A8-62

III. Hybrid Gravity Collection System

A. The DEIR must include a detailed discussion of infiltration (I/I) and exfiltration to enable decision makers to make informed decisions about the relative environmental impacts of the systems. The higher levels of inflow and infiltration (I/I), in addition to exfiltration, make this system significantly more likely to pollute (i.e., negatively impact) the groundwater supply and surface waters in the area than sealed pipe systems. Further, design elements and installation requirements make it more likely to result in significant environmental impacts. The DEIR omits a discussion of I/I and exfiltration altogether and includes only a cursory discussion of construction impacts.

1. I/I refers to inflow (water leaking into a system from the surface) and infiltration (water leaking into a system from below ground). Exfiltration is wastewater leaking out of the system. The hybrid gravity system planned for the LOWWP will have significantly more of all three than sealed small-pipe systems. This is a commonly acknowledged fact in the wastewater industry; in fact, the design capacity of the gravity collection system for the LOWWP is almost 20% larger (1.4 million gallons per day versus 1.2 mgd) than for sealed small pipe systems due to greater I/I, and the EPA points out that exfiltration results from the same cause, i.e., leaks in the system. Conventional gravity system pipes (the type planned for 95% of the LOWWP hybrid-gravity system) leak more because they are rigid, bell and spigot, gasketed pipes that can shift or become compressed breaking the gasketed seals of the connections. In fact, the LOWWP gravity system is assumed to leak more even when it is installed, as the Fine Screen Report bases the design capacity on industry installation standards for new systems (p. 1-10). These show the tolerances for new systems. Peak flows for the LOWWP gravity systems during rainy weather are estimated to be 2.5 mgd versus 1.7 mgd for sealed, small-pipe systems—due to increased I/I. The EPA identifies excessive I/I as a main cause of overflows, and overflows as a leading cause of pollution of surface waters. This is confirmed by beach closure reports in California. The 2000 report states, “The primary causes of overflows were sewer line overflow, breakage, and blockage” (p. 13). An EPA report on exfiltration in 2000 confirms that “surcharged pipe systems” (from excessive I/I) is the usual cause of overflows, and it indicates the cause of exfiltration is the same as I/I, leaks in pipes.

A8-63

It adds that "Exfiltration can result in discharges of pathogens into residential areas; cause exceedances of water quality standards (WQS) and/or pose risks to the health of the people living adjacent to the impacted streams, lakes, ground water, sanitary sewers, and storm sewers; threaten aquatic life and its habitat; and impair the use and enjoyment of the Nation's waterways" (pp. 1 & 2). A8-63 CONT

2. In heavy and prolonged storms, which must be assumed to occur during the life of the LOWWP, excessive I/I in the conventional gravity system planned for Los Osos will be impossible to control. (Note that the 5% low pressure component, a seal component, of the LOWWP is planned only for homes that need to pump wastewater uphill to the collection pipes, i.e., the sealed component is not planned to reduce I/I, e.g., in high ground water areas; thus it not significantly reduce I/I.) During one storm in the Central Valley in 2006, millions of gallons of untreated or partially treated wastewater was released, causing incalculable environmental damage. Due to excessive I/I problems, the California Men's Colony system has overflowed, polluting the National Estuary on several occasion. A8-64

3. Small-pipe sealed systems (STEP/STEG, a 100% low-pressure, or vacuum system) will not only leak less than the gravity-hybrid system planned for the LOWWP, they are better able to control leaks and overflows due to several design features: 1) the shallow pipe installation of the pipes under low pressure make leaks easier to identify, isolate, and repair, 2) each of the systems has substantial reserve capacity in tanks or vaults to take in sudden inflow and distribute it to the collection system over time (especially true of STEP/STEG systems), and 3) the systems can be monitored and controlled remotely to identify leaks and control flows in many cases). The hybrid gravity system, on the other hand, has design elements that make it inherently more prone to overflows and releases (in addition to the gasketed pipe connections mentioned above): 1) manholes, where some reserve capacity exists, are also a main pathway for inflow during wet weather and overflows when the system surcharges, 2) the system has very little reserve capacity in proportion to the size of flows, 3) the system's limited number of relatively large pumps makes pump failure more likely to cause a serious overflow, and 4) since the system relies on gravity and exact gradients to work properly (rather than pressure), blockages are more likely to occur due to grease, tree roots, damage, or shifting pipes (e.g., in earthquakes). A8-65

4. The installation techniques for the LOWWP gravity system will also cause more potential impacts to the environment, infrastructure, and community as a whole than the other systems. It requires deep trenching mostly down the paved lanes of the community, so streets will be unsuable during installation. Further, repair of streets, especially streets in the state of ill repair of Los Osos streets, will likely not be reparable in all cases and many will likely require replacement. Small-pipe sealed systems can be installed either with horizontal boring and/or shallow narrow trenching along the sides of streets, causing much less impact. Further, deep trenching will potentially impact groundwater supplies and quality, in highground water areas. Groundwater, likely contaminated from septic systems at the upper levels, will have to be dispensed. The DEIR indicates this it can be put into the open trenches after pipes have been laid, but this mitigation is not likely to handle all the water encountered and may cause trenches to become unstable. A8-66

5. Because of the type of pipe (rigid and gasketed, rather than sealed and flexible) and the design elements (mentioned above), the gravity system will be much more prone earthquake damage. Its construction methods (deep trenching), significant environmental impacts from installation (under pavement, with dewatering, and soil destabilization, etc.), and its high construction costs, may make this system infeasible to repair if a serious earthquake occurred, which has a high probability during the life of the project. A8-67

6. The Fine Screen Report states that I/I can be reduced by "fusing welding" or with a special maintenance program; however, it indicates that these measures add expense to the system. This expense and the A8-68

specifics of the programs were not discussed, but can be assumed to not be included in the cost of the system or its design. A8-68 CONT

7. The impacts of global warming (e.g., sea level rises and the possibility of fewer but heavier storms) could disproportionally impact a gravity collection system. If a gravity system leaks sea water in as a result of rising sea levels (e.g., near the bay), it will degrade the wastewater stream requiring much higher, and more expensive levels of treatment (e.g., RO), and/or disposal of the water in ways that may harm the environment. A8-69

B. Collection system alternatives, feasibility, and life-cycle costs

1. A 100% low-pressure system, 100% vacuum system, and a hybrid low pressure-vacuum system should be analyzed in the DEIR in some detail. The DEIR a one-line remark explaining why the low pressure and vacuum systems were not considered, (i.e., "higher maintenance requirements and energy costs", p. 7-21), which it repeats as entries in Table 7-5 (pp. 7-23 through 7-25). However, the report provides no sources or data to support these conclusions, and the Technical Memorandum (TM): Low Pressure found that the low pressure system had lower maintenance costs than a STEP/STEG system (e.g., pp. 20 & 21), with the update to the TM incorrectly assuming low pressure systems would use 2 hp pumps; rather than 1 hp pumps (per representatives of E-One at a November 2008 presentation in Los Osos). Further, at least one community contacted for the Rough Screening (as a case study) indicated operators prefered vacuum over low pressure for low maintenance costs, while vacuum system use fewer pumps than any of the other sealed-pipe systems although Table 7-5 in the DEIR indicates the systems have the "highest energy demand" of all collection systems (p. 7-23). Note: communities contacted for the Rough Screen Report chose vacuum systems due to high ground and they chose low pressure systems due to high relief terrain and proximity to surface waters—i.e., due to costs and to avoid environmental harm from collection system overflows. These same conditions describe Los Osos. A8-70

2. A gravity-low-pressure-vacuum hybrid system should be analyzed. After the LOWWP Rough Screen Report recommended a combination gravity-low-pressure-vacuum system, the Fine Screen Report failed to review the vacuum component of a combined gravity-low pressure-vacuum system. Such a collection system would address high groundwater concerns and concerns about contamination from seawater due to sea level rises along the bay. The first NWRI report recommended consideration of vacuum systems near the bay. A8-71

3. A more complete analysis of the above collection system alternatives should be done, especially since they potentially will reduce environmental impacts, while also reducing project costs. At the local presentation of low-pressure and vacuum system companies last November), company representatives indicated total system costs could be less than half the costs of systems currently considered. Furthermore, a more complete analysis of the potentially negative impacts from I/I, exfiltration, and the installation of a gravity system should be done, as well as an analysis of the system's potential impacts from earthquake and global warming. In every case the analyses should provide a thorough discussion of the feasibility of the systems and their mitigations, and it should include a **full-life cycle analysis**, i.e., far enough out to include the replacement cost of the longest lasting component of the system, e.g., 60-70 years for PVC pipe. A8-72

C. Relevant quotes:

1. Fine Screening Report: Inflow/infiltration (I/I) estimates for the collection system alternatives were the main source of uncertainty in calculating the future treatment facility influent flow volume. If a STEP/STEG collection system is selected it is anticipated that there will be minimal I/I since the system A8-73

is sealed and under pressure. If a gravity collection system is selected, only a system that was constructed of fusion-welded PVC piping could be operated with as little I/I as a STEP/STEG system. However, fusion welded PVC sewers are a new technology with little long-term operating history, and can be significantly more costly to install than traditional bell-and-spigot gravity sewers. Properly installed bell-and-spigot sewers will be watertight at first, and then slowly lose their integrity as the surrounding soils shift, compressing the pipes, and compromising their seals at the joints. The water-tightness of a bell-and-spigot sewer can be preserved if a maintenance program is conducted on an ongoing basis to detect and repair leaks. This program would add to the cost of a gravity sewer compared to a STEP/STEG sewer with similar levels of I/I (p. 1-9)

A8-73 CONT

2. Water Reuse, Drs. Tchobanoglous, Asano, et al, 2007: "In addition to the high installation costs of centralized collection systems (gravity systems), issues with non watertight joints and damaged sections result in potentially high volumes of inflow and infiltration, or exfiltration in the collection system. Infiltration can more than double the flow rate and dilute wastewater constituent concentrations arriving at treatment facilities in extreme cases. Long-term infiltration into a collection system can also lower groundwater levels. Exfiltration from collection systems may result in groundwater or surfacewater contamination. While large centralized collection systems are not intended to leak, the nature of large rigid pipes buried in various soils results in more leaks and damage to pipe sections over time. Further, it is costly to identify and repair sections of damaged underground collection system, especially when located below roads and buildings in developed urban areas. Piping used for decentralized facilities (STEP/STEG, etc.) is mostly small diameter flexible plastic pipes, typically of polyvinyl chloride (PVC) with solvent welded joints or medium density polyethylene (MDPE) with compression joints which can be designed for high pressures or vacuum where alternative collection systems are used. Flexible plastic piping is much less likely to leak under normal bedding conditions. These pipes can be installed easily in narrow trenches or by directional drilling that results in minimal disturbance to property and roads" (p. 769).

A8-74

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IV. Potential Environmental Impacts Collection System: STEP/STEG (and other small-pipe, sealed systems) and Gravity Hybrid.

A. Inflow/ Infiltration (I/I): The Fine Screen Report assumed an additional load of 200,000 GPD for Gravity (1.4MGD) more than STEP/STEG (1.2 MGD) due to I/I.
   1. The loss of rainwater percolation to inflow, particularly at manholes and pump stations, diminishes recharge of aquifer, lowers groundwater levels, and places additional load on the treatment plant.
   2. Leaks are harder to detect, and more costly to repair with a Gravity system. (Example: Northridge earthquake damage.) And routine flushing requires use of precious water resources.

A8-75

B. Exfiltration: Inevitable leakage of bell and spigot joints (vs. sealed pipes) will contribute to pollution of the groundwater basin.

A8-76

C. Sanitary Sewer Overflows (SSO) in event of storms, earthquakes, etc.
   According to the EPA, SSOs are a leading cause of surface water pollution.
   1. Gravity has less ability to moderate sudden inflows resulting from storms.
   2. STEP system has reserve capacity in septic tanks.
   3. STEP system has remote monitoring to ensure prompt response to problems.
   4. Gravity pipes are more susceptible to sifting sands, which could impact joints and slope.
   5. Renowned expert Dr. Tschobanoglous states: " (Water Reuse, p. 769)

A8-77

D. Low Pressure and Vacuum collection systems were brought forward in the Rough Screen but were dropped from further analysis without explanation. Consequently, neither of these alternatives has been fully analyzed. Based on new information made public, **LOCAC recommends that other small-pipe collection systems (constructed entirely with Low Pressure and/or Vacuum systems) be fully analyzed and costed.** A8-78

IV. Alternatives for Effluent Reuse and Disposal

1. **Greater programs and requirements for conservation, including LID rainwater retention and gray water reuse systems.** The Yates and Williams study points out that approximately half of the rainfall in the PZ residential areas is lost to runoff (Table4). This amounts to about 1500 AFY. According to LOCSD water billing, Los Osos has already achieved a substantial reduction in water usage from 298 MG (915 AFY) in 2004-'05 to 264 MG (910 AFY) in 2007-'08. With an aggressive conservation program, including commensurate ordinances and tiered billing, conservation can contribute substantially to the mitigation of removing septic return flows from the basin. This would include Low Impact Development (LID) of rainwater harvesting and gray water reuse. **We recommend that the EIR analyze the impact of various levels of conservation and the implications for negating the need for Broderson (offsetting its potential recharge)** A8-79

2. **Aggressive agricultural reuse and exchange strategies**

The Cost/ Benefit Analysis of Effluent Reuse/ Disposal Alternatives, performed by the TAC's Finance Group follows.

Reuse/Disposal Level	Capital Costs	Annual O&M	Storage	SWI Mitigation
1a: Full ag reuse 460 AF Spray Fields 680 AF Conservation 160 AF Cemetery 50 AF Total 1,350 AF Storage (290 AF)	$12.7M - $14.3M	$100,000 - $190,000	290 AF	140 AFY
1b: No ag reuse Spray Fields 1,190 AF Conservation 160 AF Cemetery 0 AF Total 1,350 AF Storage (210 AF)	$12.8M - $15.6M	$125,000 - $275,000	210 AF	90 AFY
2a: Full ag reuse 460 AF Spray Fields 232 AF Broderson 448 AF Conservation 160 AF Cemetery 50 AF Total 1,350 AF Storage (140 AF)	$13.2M - $13.9M	$400,000 - $440,000	140 AF	240 AFY
2b: No ag reuse Spray Fields 742 AF Broderson 448 AF Conservation 160 AF Cemetery 0 AF Total 1,350 AF Storage (30 AF)	$14.9M - $16.7M	$440,000 - $530,000	30 AF	190 AFY

A8-80

NOTE that the capital cost of Level 2b (the preferred project in the DEIR) has the highest capital costs ***and*** highest annual O&M. Bottom line: ***it is cheaper and smarter (from a SWI mitigation standpoint) to pursue agricultural reuse NOW and minimize the need for spray fields.***

DEIR postponed and relegated agricultural reuse (both in-lieu and exchange) to the water purveyors, rather than consider it as a means of reuse/ disposal to the project. They justify this by saying that this would result in equitable cost-sharing among all users in the basin.

> According to Bahman Sheikh, Ph.D., P.E. and Dana Ripley, consultant for the 2006 LOWW Management Plan Update, the contracts with farmers which were developed in the Monterey Bay area took up to 8 years, primarily because that was the period of testing required before crop application was approved. Now that those tests have been completed and approved, the contracting period with farmers in the Los Osos Valley should be very short, particularly since discussions with farmers were already begun in 2006.
>
> Sheikh: "Over 400 wholesale water recycling projects are in operation in California… the farmers located to the east of Los Osos have indicated their willingness (indeed, their enthusiasm) for using recycled water instead of pumping groundwater from the very aquifer that needs relief to over-pumping. Just because Carollo was not tasked to speak to those farmers is not enough reason to leave these growers out of the project.
>
> **"Squandering the opportunity to enlist the farmers now in the water reuse component of wastewater management in Los Osos is a mistake."**

A8-80 CONT

1 Bahman Shiekh, Ph.D., P.E. 25+ years of specialized professional experience and expertise in water reclamation, recycling, and reuse; provides consulting services to public and private clients for planned and ongoing water recycling projects, primarily in California, as well as in 20+ countries around the world. He serves on the Research Advisory Board of the National Water Research Institute and as Board member of Water Reuse Foundation.

V. Other comments

1. The Yates and Williams study attributed the slow rate of nitrate reduction to the fact that many sources (besides septic systems) contribute to the relatively high nitrate levels in the basin (e.g. horse ranches, high-fertilizer using landscaping, and agriculture). **LOCAC recommends that the county pursue a nitrate management program**, which would likely result in a significant reduction of nitrates in the groundwater.

A8-81

2. The DEIR states: "Groundwater produced by pumpers in the LO Basin has averaged approximately 3,500 AFY since 1985 and has remained relatively constant since the implementation of the 1983 building moratorium.. Private domestic and agricultural irrigation production has historically been established from land use information." **Due to the apparent expansion of agricultural and residential development on the east side of the basin, these assumptions are no longer viable.**

A8-82

3. Potential Impacts of Climate Change: Gov. Schwarzenegger's Executive Order S-13-80 (11/14/08) requires project planning to account for the impacts of climate change. It recognizes the particular threat sea level rises pose for coastal communities and requires public projects to include climate change planning. **How will the county's project protect the aquifer against the impact of rising sea levels?**

A8-83

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1. Impact on basin from loss of septic return flows: **What is the basis for the DEIR assumption of only 957 AFY total annual septic return flows (that would be lost to basin when WWP in complete)? If this is *after* the allowance for conservation of 160 AFY, then shouldn't it be adjusted to reflect the impact at the beginning of the project?** A8-84

2. Impact of discharge at Broderson on groundwater quality: Any mixing of sewer effluent with the only potable water supply for Los Osos/ Baywood Park risks the contamination of that supply. **How would the county mitigate this risk** without relying on imported water or desalination? A8-85

3. Groundwater Quality: **Tertiary treatment** should be designed into the project from the beginning in anticipation of increasingly stringent regulations, whether for ag or urban reuse, or Broderson. According to the TAC's Pro/Con Analysis, tertiary treatment would cost an additional $3.5M in capital costs and an additional $30,000 to $100,000 in O&M. **We would like to see the DEIR consider this design up front and get proposals for related costs.** A8-86

4. Efficacy of Broderson to recharge aquifer: Sierra Club: *"No one can afford for the County to be wrong in its assessment of this key component. There are serious questions surrounding the science and regulatory compliance in the selection of Broderson as a viable site for disposal of effluent and recharge of the aquifer. The Final EIR needs to provide scientific analysis confirming that Broderson can accommodate the high rate of effluent proposed, at the proposed level of treatment, and that this is the best means by which to replenish the aquifer and significantly reduce saltwater intrusion."* **We concur and ask that further (new) analysis be done before this means of discharge is selected.** A8-87

5. Water supply. **Imported water and/or desalination are not options for the future of Los Osos' water supply.** A8-88

6. Alternatives to Effluent Reuse/ Discharge: Agricultural Reuse: *"Squandering the opportunity to enlist the farmers now in the water reuse component of wastewater management in Los Osos is a mistake."* **(**Sheikh) **We concur and request that the county task their consultants to explore agricultural reuse of WW effluent immediately.** A8-89

7. Alternatives to Effluent Reuse/ Discharge: **Conservation** and Low Impact Development (LID) of rainwater harvesting and gray water reuse. With an aggressive conservation program, including Low Impact Development (LID) of rainwater harvesting, gray water reuse, ordinances, and tiered billing, conservation can contribute substantially to the mitigation of removing septic return flows from the basin. **We recommend that the EIR analyze the impact of various levels of conservation and LID and the implications for negating the need for Broderson (offsetting its potential recharge).** A8-90

8. Bottom line comparison of alternatives: **It is cheaper (both capital costs and annual O&M) and smarter (from a SWI mitigation standpoint) to pursue agricultural reuse NOW and minimize the need for spray fields.** A8-91

9. Collection Systems: **Fully analyze, cost, and compare other small-pipe collection systems (constructed entirely with Low Pressure and/or Vacuum systems).** A8-92

10. **Pursue a basin management plan which includes a nitrate management plan.** Such a plan would include landscape fertilization, horse ranches, domestic animal waste, agriculture, and domestic water softeners throughout the LO groundwater basin. A8-93

11. **How will the county's project protect the aquifer against the impact of rising sea levels?** A8-94

SUPPORTING DATA AND EXPERTS

[1] Yates & Williams study in 2003 estimated 36% of total upper aquifer recharge after "perching" effects = 1267/3527 AFY. (DEIR Table 4)

[2] Hopkins Groundwater Consultants estimated septic returns = 36% of total 2,995 AFY = 1,078 AFY (DEIR: Table 8, page 24)

[3] National Water Research Institute – Non-profit organization based in Fountain Valley, CA, which sponsors projects and programs focused on ensuring safe, reliable sources of water now and for future generations. They fund scientific research projects and have provided expert peer review of LOWWP in 2006 and 2008. Their interests include:

- Encouraging public support of better water practices, such as conservation and water use efficiency.
- Implementing strategies that better allocate and sustain water resources on regional and national levels.
- Protecting existing water supplies from impacts on quality and quantity.
- Developing technologies that identify and remove new contaminants from water supplies.
- Identifying treatment technologies that are cost and energy-efficient.
- Educating youth on water issues and future water needs.

[4] George Tchobanoglous, P.E. – Professor Emeritus, Civil and Environmental Engineering, UC Davis. Specialty in wastewater treatment and reuse. Authored and co-authored over 300 technical publications, including 12 textbooks used in over 200 colleges and universities.

[5] Larry Raio – Currently teaches at Cal Poly, Architectural Engineering Department, Earth and Soil Science Department (5 years); worked with Earth Systems Consultants for 22 years as Lab Manager, Staff Engineer and Drill Rig Operator; drilled hundreds of borings in Los Osos for groundwater depth (piezometers) and percolation tests; helped design over 100 on-site sewage disposal systems throughout the county, and many in Los Osos; personally drilled borings and installed monitoring wells for Brown and Caldwell Study in 1983 for Los Osos as a contract driller. Education: B.S. in Natural Resources Management, and M.S. in Soil Science, both from Cal Poly, San Luis Obispo.

[6] Thomas Ruehr, Ph.D., Professor Emeritus, Soil Science, Cal Poly, San Luis Obispo

DRAINAGE AND SURFACE WATER QUALITY
DEIR Section 5.3 and Appendix E

SUMMARY

We strongly recommend that the county's project consider storm water as a resource, and request that they analyze alternative methods of controlling and utilizing drainage and runoff. A8-95

We request that an analysis of the threshold of significance be conducted for Broderson. A8-96

DISCUSSION

According to the DEIR Section 5.3, sources of recharge to upper aquifer (Zone C) include: rainwater percolation and irrigation (~1490 AFY), septic return flows (~631 AFY), and leakage through perched layer (!375 AFY), subsurface inflow from Zones A, B, creek, and underlying bedrock (~625 AFY). Sources of estimated recharge to lower zones include: leakage from upper zones (~880 AFY), Creek Compartment (~370 AFY), and Seawater Intrusion (~470 AFY).

The DEIR further states that, due to development and higher groundwater levels, the capacity of natural sumps (sandy pits with no outlet) has been reduced, thus contributing to localized flooding. In response to this, the DEIR recommends that a community drainage system be constructed, including curbs, gutters, pavement, and storm drains.

Wouldn't this simply capture runoff and send it somewhere else (e.g. the WW treatment plant)? .. rather than providing the opportunity for it to recharge the upper aquifer via percolation? This would appear to rob the aquifer of approximately half of the 1490 AFY attributable to rainwater percolation and irrigation in the populated area, i.e., 750 AFY. Moreover, it would the same amount of load to the treatment plant.

Based on information from the Water Institute*, we recommend that the county's project consider storm water as a resource, and analyze alternative methods of controlling and utilizing drainage and runoff. This approach is based on the four R's of conservation hydrology: **Receive, Recharge, Retain, and Release**.

a. "Receive: We must implement and enforce land use patterns that enhance the receptive capacity of our watersheds."

b. "Recharge: Recharge potential and functions are impaired by the hardening and paving over of natural recharge areas. To increase recharge we must limit impervious surfaces and the wholesale conversion of native vegetation. We must implement stormwater techniques designed to slow it, spread it, and sink it as a deposit into the Earth." A8-97

c. "Retain: The retention of recharged precipitation is an asset. Conservation Hydrology strategies should appropriately slow water down, increasing the residence time of water storage in our watersheds."

*Brock Dolman, The Occidental Arts and Ecology Center, a nonprofit education center in Northern California, established the Water Institute to research, educate, and train people on how to holistically manage a watershed.

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d. "Release: Human development practices (creating impervious surfaces, channelizing stormwater, etc.) tend to increase the rate and volume of stormwater's return to the ocean via excessive runoff and heightened flood discharges. This directly reduces the landscape's ability to retain water and diminishes the amount of water available for later release during the dry season. A8-97 CONT

2. Thresholds of Significance: The DEIR in section 5.3.3 addresses only the proposed treatment plant sites and stream crossings; it does *not* address Broderson. We request that an analysis of the threshold of significance be conducted for Broderson. A8-98

QUESTIONS/ COMMENTS TO BE ADDRESSED:

1. We question the DEIR's recommendation that a community drainage system be constructed, including curbs, gutters, pavement, and storm drains. It appears that this would simply capture runoff and send it somewhere else (e.g. the WW treatment plant, adding to its load). And the basin would be robbed of approximately 750AFY of recharge. Please explain reasons for the DEIR's recommendation. A8-99

2. We ask that the county analyze alternative methods of controlling and utilizing drainage and runoff, based on the four R's of conservation hydrology: Receive, Recharge, Retain, and Release. A8-100

3. We request that an analysis of the threshold of significance be conducted for Broderson. A8-101

LOCAC DEIR REVIEW

GEOLOGY
DEIR Section 5.4 and Appendix F

SUMMARY

Based on the following geological analysis by experts, the key concerns raised in the Geology section of the DEIR include:

- There are scientific reasons to question the ability of Broderson leach fields to recharge the upper and lower aquifer as projected.
- There is a high potential for water to daylight out the slope if there is water pressure from above and it can't move vertically fast enough, resulting in pollution of the wetlands and bay.
- There is a serious risk of liquefaction and landslide at Broderson and the housing tract below.

DISCUSSION

The following report was submitted by Larry Raio.[1]

A. Groundwater Conditions

The DEIR states: *"Groundwater depths range from approximately near or at the ground surface to greater than 80 feet below the existing ground surface west of Los Osos Creek. ... The potential exists for groundwater to be encountered at different depths at other locations and times, above impermeable layers, and within fractures or discontinuities within the bedrock (if encountered). Groundwater and soil moisture conditions fluctuate seasonally, and because of changes in precipitation, storm runoff, irrigation schedules, and other factors."*

1. **The statements given describing the groundwater conditions are very general and do not adequately characterize the complicated and quite variable system that it is.** There are numerous perched water tables located throughout the stabilized sand dunes areas of Los Osos. These "perched" water tables in the stabilized sand dunes have edges; the water flows to the edge and travels down to the next one. So there is both vertical and horizontal movement of water through these lenses.

A8-102

These clay lenses were formed in the low lying areas in the middle of the sand dunes when there was no where else for the water to go. The fines in the sand would be washed to the bottom of the dune during rains and form a clay or silt lense called lamellae. But the layer is limited in size and has edges. I have drilled hundreds of borings and placed piezometers (perforated pipes installed in borings for measuring depth to groundwater) and have found that the depth to groundwater is quite variable and difficult to predict. I drilled one lot where there was high water at the front of the lot (8-feet) but could not find any on the back of the lot (deeper than 25-feet), and the lot was relatively level.

When the dunes would shift during the heavy and constant winds (think of Oceano Dunes) these lenses would be covered. Even a 1/8-inch layer of silt will hold water. Now there could be many thin layers on top of each other with wind blown sand between them. And these layers aren't as solid as you might think. After it rains, the silt layer will dry out and start cracking, and the edges will curl up. You have probably seen this in other low

[1] Larry Raio – Currently teaches at Cal Poly, Architectural Engineering Department, Earth and Soil Science Department (5 years); worked with Earth Systems Consultants for 22 years as Lab Manager, Staff Engineer and Drill Rig Operator; drilled hundreds of borings in Los Osos for groundwater depth (piezometers) and percolation tests; helped design over 100 on-site sewage disposal systems throughout the county, and many in Los Osos; personally drilled borings and installed monitoring wells for Brown and Caldwell Study in 1983 for Los Osos as a contract driller. Education: B.S. in Natural Resources Management, and M.S. in Soil Science, both from Cal Poly, San Luis Obispo.

lying areas like after a pond dries up. So if you have many of these types of layers on top of each other, all of them with some windblown sand between them, they will hold water but not indefinitely. They really just slow the water down to a trickle.

That's why the water tables fluctuate so much in Los Osos; because the water is percolating slowly through these lenses. During the summer the water table lowers, and during the rainy season, they rise. But they only rise so much because of the edges. It would be like drilling microscopic holes in the bottom of a pot and putting the pot under the faucet and turning the water on slowly; the pot would eventually fill up and start flowing over the edge, so the water level would only rise to a certain level. Turn off the water, and the water would slowly drain but it may not empty before the water is turned on again.

It was in some of these perched water tables that had test wells placed in for the Brown & Caldwell study. The problem is that these perched waters are so variable and abundant, that there has not been an adequate study done to date to properly characterize this shallow underground water system. We also don't know changes in groundwater levels during the winter vs. the summer and during wet seasons vs. dry seasons. A8-102 CONT

The overall direction of the water flow through the lamella under ***normal*** conditions is going to be vertical. The water flow is still going to be downward but it's going to be much slower than the >5 minutes per inch that the infiltration trenches are designed for. As the water flows downward and it contacts the lamella, it will flow laterally until it hits an edge, and then it will flow down again. The vertical movement will be much slower than the rates used in the design of the percolation trenches at Broderson. There is a high potential for water to daylight out the slope if there is water pressure from above and it can't move vertically fast enough. It will find the path of least resistance, and it will flow laterally. These lamellae will also interrupt the head pressure in the column of water that is supposedly going the recharge the lower aquifer. For the water to travel 100 vertical feet, it may have actually traveled 1000 lineal feet once it has traveled around all the lamellae. This enhances the filtration properties of the Baywood soils as Dr. Tom Ruehr mentions at the end of his statement.

The DEIR states: *Seismic Ground Shaking, 5.4-B:* ***The project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving a strong seismic ground shaking.***
Proposed Project 1
Collection System
Liquefaction can result in ground mobility that impacts pipeline grades, or results in ***pipelines floating*** *out of the ground in areas of liquefaction. The collection system under Proposed Project 1 would consist of approximately 45 miles of pipeline that will essentially be constructed through the Los Osos Community. Loose sand blankets are found at the upper five to ten feet of the ground surface over most of the collection system area. Portions of the collection system network traverse areas having a relatively high potential for liquefaction. The potential for liquefaction and seismic settlement to impact pipelines may be governed by the depth of the pipeline relative to the depth of liquefiable soils. The proposed collection system for Proposed Project 1 may experience significant liquefaction impacts. Furthermore, this potential significant impact could result in pipeline breaks and release of untreated and/or treated effluent along the proposed collection/ conveyance system, including within Los Osos Creek and Warden Creek. Thus even in the event the near surface loose dune sand were saturated due to precipitation or effluent disposal at the time of an earthquake, the groundwater depths would not rise near the ground surface at the site. Therefore, the proposed facilities at Broderson would not change the potential for liquefaction or seismic settlement to occur within the soils because of the effluent disposal system and estimated mounding at the Broderson site.considerable and, therefore, significant for Proposed Projects 1 through 4.*
Mitigation Measures
Project-Specific A8-103

In addition to the implementation of Mitigation Measure 5.7-B.1 to reduce impacts from accidental spills due to seismic conditions, the following mitigation measures shall be implemented.
Proposed Projects 1 through 4, 5.4-C1 **"***Prior to approval of the improvement plans for the proposed facilities that are part of the collection system and at the treatment plant site, a geotechnical report that addresses liquefaction hazards shall be prepared and approved by the County of San Luis Obispo. The geotechnical report shall state the recommended actions for the collection system and treatment plant site so that potential impacts from seismically induced liquefaction would be reduced to less than significant."* A8-103 CONT

How can the county be sure that a geotechnical report will conclude that the potential impacts from liquefaction can be reduced to less than significant? And if they can be reduced to less than significant, what will be the cost of such mitigating measures be? It could more than double the cost of the collection system, or more, since the entire project is located in areas of very high potential with some areas of moderate potential. How can an informed decision be made without this information? **It is clear that this study must be made prior to this project moving forward.**

From CEQA Article 7, Section 15086 (d) of the Public Resources Code, it is also clear that CEQA does not allow the promise of a report that will reduce to the potential impact to replace an actual study that states how the potential impact will be reduced to less than significant and what the associated costs may be for those mitigating measures (if there are any to begin with). A8-104

Liquefaction has been clearly identified to have significant environmental effects. Detailed performance objectives for mitigation measures addressing those effects must be readily available along with guidelines or reference documents concerning mitigation measures. This is clearly not available. To state that the level of significance after mitigation is less than significant with out any proposed measures, reference documents, and guidelines but only on the promise of a study is negligent.

It is also clear from numerous studies that large gravity collection system pipes are the most susceptible to settlement from liquefaction and/or rupture resulting in loss of serviceability.

In Section *5.4-C2*, the DEIR states: **"***Prior to approval of improvement plans, an Emergency Response Plan (ERP) shall be prepared as part of the operation and maintenance plan for the proposed collection system. The ERP shall recognize the potential for liquefaction, seismic hazards and ground lurching, to impact the pipeline or other proposed facilities, and specific high hazard areas shall be inspected for damage following an earthquake. "Soft Fixes" shall be incorporated in the ERP. Soft fixes typically consist of having a plan in-place to address the hazards, such as can be achieved by storing supplies and equipment for repair.*

And, 5.4-F1: *Prior to approval of the improvement plans for the proposed facilities, a geotechnical report that addresses the potential for lateral spreading, ground subsidence, and ground lurching and provides measures to reduce potential impacts to less than significant shall be prepared and approved by the County of San Luis Obispo.* A8-105

Again, the promise of a report does not replace the need for the required mitigation information. Expansive soils have been clearly identified to have significant environmental effects. Detailed performance objectives for mitigation measures addressing those effects must be readily available along with guidelines or reference documents concerning mitigation measures. This is clearly not available. To state that the level of significance after mitigation is less than significant without any proposed measures, reference documents, and guidelines but only on the promise of a study is negligent. The costs for mitigation measures need to be known before approval of any of the proposed projects.

We request that the county and its consultants conduct a (new) scientific study to characterize the shallow underground water system, particularly at Broderson and down slope, to determine the extent of recharge possible.

2. **Water permeability problems in Baywood fine sand**[2] : The windblown sand associated with most of the Los Osos community is mapped as Baywood fine sand. The Natural Resource Conservation Service (accessed at http://soils.usda.gov/) describes this soil with the following properties: "Some pedons also have a few faint lamellae or a few small dark reddish brown concretions."

The fine lamellae occur about every 2 to 4 inches. They are roughly parallel to the land surface. Although the total number has never been counted, hundreds to thousands exist with depth below the land surface. Each layer is finer than a pencil consisting of an accumulation of clay (5 to 7 % within the lamellae) and a coating of iron oxides both above and below each layer. The clays and iron oxides have partially filled the soil pores. The iron oxides have provided a weak cementing action allowing these lamellae to persist over time.

A8-106

Because some of the soil pores are partially filled with clay and iron oxides, the ability of these pores to transmit water directly downward (vertically) is impaired. Each time a film of water contacts one of these lamellae, the water temporarily ponds on top of this layer. Under the influence of gravity, the temporarily ponded water moves laterally (sideways) down hill. Eventually the water will slowly move through this lamellae layer until it encounters the next layer. The same process is repeated at each layer.

The overall effect of these numerous parallel lamellae is to slow vertical water movement forcing more of the water to move downward in a stair step fashion with considerable lateral movement of water. This problem creates difficulties when trying to predict the rate of water permeability in these soils. Disturbed samples will have high water infiltration rates vertically because the lamellae have been mixed, but non-disturbed samples will have slower vertical flow with considerable lateral redistribution of water from the site of water application.

Water permeability rates for many of the soil sites in the Los Osos area underlain by the wind blown sands are overly exaggerated because this phenomenon has been ignored by most scientists. The lamellae enhance the filtration process because the water flow is impeded and more effective blocking of particles (clay, bacteria, viruses) occurs in the water flow path.

[2] Thomas Ruehr, Ph.D., Professor of Soil Science at Cal Poly, San Luis Obispo

Baywood Fine Sands — Lamella Formation
As demonstrated by Dr. Thomas A. Ruehr

A8-106 CONT

The above photo from Dr. Tom Ruehr Ph.D., Professor of Soil Science at Cal Poly, is clear evidence of these fine lenses that hold or transport water laterally below grade. The 400,000 GDP discharge planned at Broderson will likely move laterally down slope, rather than vertically. Hence, the hope of creating a pressure gradient strong enough to force reversal of seawater intrusion in the lower aquifer will not be realized. On the contrary the most probable destination of these waters will be the brackish wetlands around the Morro Bay shoreline contaminants will interfere with the reproductive cycles of the biological life in Morro Bay, including Steelhead, which have historically spawned in the bay. Studies by MBNEP have shown alarming damage to species of fish in the MB.

How will the county's project minimize the risk of lateral movement of discharge at Broderson, resulting in pollution of the bay and its wetlands with emerging contaminants?

3. An unintended consequence of this disposal approach will cause the liquefaction of the fine blown sand underlying the Broderson discharge site and the Redfield Woods development below. The very real potential for this problem is evidenced by the occurrences in 1979 and again in the mid-1980's, documented and pictured in local newspapers. **How will the county's project ensure that the risk of liquefaction and landslide are mitigated?**

A8-107

4. The October 17, 1989 Loma Prieta earthquake was responsible for 62 deaths and 3,757 injuries. In addition, over $6 billion in damage was reported including damage to 18,306 houses and 2,575 businesses. Approximately 12,053 persons were displaced. The most intense damage was confined to areas where buildings and other structures where situated on top of loosely consolidated, water saturated soils. Loosely consolidated soils tend to amplify shaking and increase structural damage. Water saturated soils compound the problem due to their susceptibility to liquefaction and corresponding loss of bearing strength. See www.es.ucsc.edu/~es10/fieldtripEarthQ/Damage1.html

It appears that the DEIR assumes that STEP has a greater risk associated with seismic activity. However, the 1994 Northridge earthquake is well documented for damage to gravity pipes (14 years and $2 billion to repair), but pressurized water pipes were much easier and quicker to repair, and over 60 of water was restored within 24

hours. Likewise, Morro Bay gravity collection pipes were so damaged in the Dec 22, 2003 earthquake that FEMA grants were awarded. A8-107 CONT

The DEIR states in Section 5.4.5 - Level of Significance Prior to Mitigation:
Less Than Significant or No Impacts were found related to the project being susceptible to fault rupture and landslides. These issues will not be discussed further.

- In light of existing evidence that Los Osos has a 7.5 Hosgri fault 10 miles offshore 7 magnitudes higher than the San Simeon 2003 quake, this appears to be an unscientific assumption. **A complete analysis is needed of the lamellae lenses and their impact on percolation rates, liquefaction, and landslide.** A8-108

- The gravity trenching will cut through the clay lenses causing the waters to run down the trenches to the bay. A matrix of 8 foot deep trenches will make a creek that will drain these perched water bowls (clay lenses) out to the bay where we will lose large amounts of water. When a quake occurs, the wet soils in the trenches will consolidate and the engineered slope of the beds will be lost (as described by Brandman). **The gravity sewer will cease to function as designed, and Los Osos will be without sanitary services and at risk of cholera and other contagious diseases. How will services be provided? At what cost? Please detail the recovery plan as case law has adjudicated.** A8-109

Proposed Projects 1 Through 4
The DEIR's finding of "Less than significant" is inadequate, in that mitigations are called for but not detailed. The plan must be available to be evaluated.

SUMMARY OF QUESTIONS AND COMMENTS TO BE ADDRESSED

1. **We request that the county and its consultants conduct a (new) scientific study to characterize the shallow underground water system, particularly at Broderson and down slope, to determine the extent of recharge possible.** It was in some of the perched water tables that had test wells placed in for the Brown & Caldwell study. The problem is that these perched waters are so variable and abundant, that there has not been an adequate study done to date to properly characterize this shallow underground water system. We also don't know changes in groundwater levels during the winter vs. the summer and during wet seasons vs. dry seasons. A8-110

2. **How can the county be sure that a geotechnical report will conclude that the potential impacts from liquefaction can be reduced to less than significant? And if they can be reduced to less than significant, what will be the cost of such mitigating measures be?** It could more than double the cost of the collection system or more sense the entire project is located in areas of very high potential with some areas of moderate potential. **How can an informed decision be made without this information? It is clear that this study must be made prior to this project moving forward.** A8-111

3. Ground lurching has been clearly identified to have significant environmental effects. Detailed mitigation measures must be available and the costs for mitigation measures need to be known before approval of any of the proposed projects. **In the event of a 6.8 to 7.5 magnitude earthquake how will the damage be repaired? Who will be liable for the cost of repairs?** A8-112

4. It is also clear from numerous studies that large gravity collection system pipes are the most susceptible to settlement from liquefaction and/or rupture resulting in loss of serviceability. The gravity sewer will cease to function as designed, and Los Osos will be without sanitary services and at risk of cholera and other contagious diseases. **How will services be provided? At what cost? Please detail the recovery plan as case law has adjudicated.** A8-113

LOCAC DEIR REVIEW

5. There is a high potential for water to daylight out the slope if there is water pressure from above and it can't move vertically fast enough. **How will the county's project minimize the risk of lateral movement of discharge at Broderson, resulting in pollution of the bay and its wetlands with emerging contaminants?** A8-114

6**.** The DEIR's finding of "Less than significant" is inadequate, in that mitigations are called for but not detailed. **The mitigation plan must be available to be evaluated.** A8-115

7. South Bay Fire Department and equipment is housed at Highland Ave in the planned effluent mound area. **How will needed services be provided and restored as the demands increase sharply from life threatening injuries normally occurring in the course of a seismic event, as gas, water and sewer mains will be damaged and loss of power is likely?** A8-116

LOCAC DEIR REVIEW

BIOLOGICAL RESOURCES
Section 5.05 and Appendix G

SUMMARY

All four projects would have potentially significant, cumulative effects on biological resources. We have concern about the future status of existing wetlands in the project area – with the loss of septic tank leachfields in the Prohibition Zone. The emphasis should be on eliminating impacts, rather than simply mitigating them.

We request a response to the following questions:

- What is the impact of this loss of leachfields to existing wetlands, including loss of habitat?
- Where is the source data for this information?
- If wetlands loss occurs, how will it be dealt with? Please supply details of mitigation monitoring if it is necessary. .

DISCUSSION

Mitigation strategies are necessarily tentative because much of the potential effects are unknown until a project is decided upon and work actually begins. As far as we can tell, there will be extensive consultation with agencies such as the California Department of Fish and Game, US Fish and Wildlife Service, and credentialed biologists both before any project component begins and whenever the possibility of adverse effects occurs. A8-117

Workers will be educated about general detection and avoidance of sensitive resources by a USFWS approved biologist. Such approved biologists will also monitor construction in habitats of the named species of concern. This monitoring will be on a daily basis until the initial disturbance of any habitat is completed. When appropriate, individuals of the species of concern will be relocated.

The mitigation measures as described appear to be based on appropriate data and thorough.

ISSUES /ERRORS/OR OMISSIONS

The wetlands concern discussed in the summary is our only issue.

LOCAC DEIR REVIEW

CULTURAL RESOURCES
DEIR Section 5.6 and Appendix H

SUMMARY

The DEIR states that the collection system would disturb human remains within the identified sensitive areas of the community of Los Osos. Human remains have been identified during data recovery excavations undertaken for the previously proposed wastewater project. There is a general assumption that STEP/STEG has a larger cultural footprint because of replacement of septic tanks, though there is no detail about how many tanks would be replacements vs. new. There is no differentiation between the piping size and depth of the two collection systems. There is an assumption that 6-28 ft deep Gravity trenching in the middle of paved roadways will not affect cultural discovery. The installation differences between directionally bored, smaller, more flexible, shallow STEP/STEG collection pipes and the Gravity plan have not had a reasonable comparison because that data is either not considered, is contradicted or is simply deleted.

There is much discussion in the Executive summary about a wide variety of mitigation measures that will apply to the project and likely add expense and delay. There is no analysis of the potential costs of any mitigation impact should cultural sites be disturbed. The potential high chance for this at every stage of the project would ask for a better evaluation of the two collection systems.

The DEIR does not take into consideration the historical significance of the Tonini farm and buildings and states that there is no mitigation required. This was an early 1900's dairy farm with two homes and 9 outbuildings that may be over 100 yrs old. There are conflicting statements on the cultural, agricultural, and historical status of the Tonini site.

DISCUSSION

1. **STEP Cultural Impact is NOT the same as Gravity (Collection).**

Table 5.6-2 (page 29) notes that the collection area of archaeological sites impact is the same for all 4 projects. This assumes that both STEP and Gravity use the same amount of trenching and lift stations. This is incorrect and runs throughout this Appendix. Clearly the analysis of cultural impacts is inadequate by lumping directionally- bored collection technology with Gravity trenching. To assume that no cultural activity may occur under the 42 miles of roadway, once they are trenched, fails to address the square miles of deep trenching necessitated by the Gravity collection (42 miles X 20 ft wide street areas). To assume that new installation of septic tanks and their pressurized shallow laterals is significantly higher than what the deep lateral trenches will be for Gravity is not addressed either. A8-118

Request further clarification and source data concerning the difference between the disturbance impact of a STEP vs. gravity collection in the LOWWP: i.e. STEP – replacement of septic tank to the front yard of the residence with shallow trenching and small pipes as compared with Gravity with its deep trenching and large pipes.

2. **Tonini site may be considered to be of historical significance**.

It would be prudent to determine if the Tonini site now has new historical standing having just been entered into a newly designated scenic mountain range and along a scenic roadway. There is also discussion of the crops currently being grown at Tonini, as it is a fully operating agricultural business on prime agricultural land. A8-119

LOCAC DEIR REVIEW

PUBLIC HEALTH AND SAFETY
DEIR Section 5.7 and Appendix I

SUMMARY

Issues of concern that are not adequately addressed in the DEIR include:

1. Anticipation of upgraded health standards for any re-use of effluent discharge, which would require tertiary treated water
2. Discussion of earthquake potential, impact and repair
3. Mitigation for potential trench wall and roadway collapse
4. Discussion of prevention measures for overflow/spill of contaminated raw sewage

DISCUSSION

1. **Anticipation of upgraded health standard regulations for treated/recycled water**:

- Emerging contaminants present in some food sources and virtually all natural water sources have been identified as a primary causative factor in many biologic and developmental functions.
- A convergence of environmental factors is forcing a re-evaluation of toxic pollutants and will, without doubt, result in significantly more stringent environmental regulations by DHS and EPA.
- Many toxic contaminants can be almost completely removed from water, but requires intensive multi barrier treatment. Some cannot. In order to preserve an adequate future potable water supply it will become necessary to apply a best means approach.
- Projects 1,2,3,4 do not require effluent treatment beyond secondary treatment

There are strong indications from EPA and DHS (California Department of Health Services) that regulations for water and, most particularly, recycled water will be aggressively expanded as emerging contaminants continue to be studied. With increased public awareness of food, air and water borne health threats in the form of pollutants, evolving virus/bacteria, and unmonitored production practices, selling recycled water to an alert, wary public will become increasingly difficult and will only be accomplished by establishing confidence in regulatory agency diligence. There is much evidence and extrapolation from evidence that emerging contaminants are having a serious, detrimental impact on human and wildlife health, particularly to the endocrine and reproductive systems. It is now understood that hormone mimicking drugs and other chemicals have a bio-cumulative effect and are readily detectable in breast milk. It is also common knowledge that the two main categories of chemicals, mutagens and carcinogens, are creating health and developmental problems in children and wildlife. Young girls are experiencing early endocrine system activation, resulting in very early maturation, while boys are also undergoing discernable physical changes. The incidence of uterine and breast cancers are now common in increasingly younger women and have been linked to hormone-mimicking substances in food and water. Frogs and other aquatic life have lower sperm counts and are producing malformed offspring. Because water is consumed in larger quantities than other foods, it is believed that water quality has the most significant impact. As technology in detecting, identifying and treating for these emerging contaminants continues to advance, it is anticipated that regulations will become increasingly stricter in both contaminant and allowable levels. A8-120

2. **There is discussion posing future reuse/recharge in ag exchange yet the DEIR contains no discussion about treatment and infrastructure requirements.**

Wastewater must be treated to specific standards for direct use on edible crops. New draft regulations setting new guidelines for disposal quality water (level of treatment required before water can be discharged to a disposal site) can be seen in Title 22, Groundwater Recharge Reuse DRAFT Regulation, August 5, 2008 (pg.20- A8-121

22) which states proposed regulations for the use of RO for TOC's (total organic compounds). The DEIR refers to Broderson as a recharge site for the upper aquifier: Current IPR (indirect potable reuse) regulations indicate that water pumped to Broderson would require at least tertiary level treated water if soil characteristics, hydrology, distance to withdrawal, etc. prove to be inadequate to remove all contaminants to the appropriate level. However, indications are that IPR water will require advanced treatment systems with multi-barrier safeguards in the not too distant future. There is clearly a movement toward the use of advanced treatment systems including reverse osmosis, UV and various levels of sophisticated filtration systems

A serious potential health risk, rarely discussed, exists as a result of open bodies of water such as ponds (as opposed to wells) exposed to tritium as a result of the proximity of Los Osos to Diablo Nuclear Power Plant. There is no known system to remove tritium because it is actually a water molecule, but testing for this and other 'at risk' contaminants should be mandatory. There are many sites explaining tritium, but the Greenpeace website, www.greenpeace.org, explains it more efficiently and economically of space than others. Other references for tritium and endocrine disruptors include:

> *Evidence suggests that environmental exposure to some anthropogenic chemicals may result in disruption of endocrine systems in human and wildlife populations. A number of the classes of chemicals suspected of causing endocrine disruption fall within the purview of the U.S. Environmental Protection Agency's mandates to protect both public health and the environment. Although there is a wealth of information regarding endocrine disruptors, many critical scientific uncertainties still remain. Research includes determining what effects are occurring in human and wildlife populations, the chemical classes of greatest concern, the ambient levels of exposure, and how unreasonable risks can be mitigated.*
> EPA: Encocrine Disruptors Research Initiative http://www.epa.gov/edrlupvx/
>
> *The USGS has a major interest in collaborating with other agencies to inform the public and Congress of the issue of endocrine disruption. Over the last 10 years, the USGS has developed research and monitoring programs on the biological response to endocrine disrupting chemicals (EDC's) in the nation's waterways and has identified priorities and opportunities for collaboration with other federal agencies*.
> Sue Haseltine, Associate Director for Biology,
> USGS://es.epa.gov/ncer/publications/workshop/cenr_2202007.pdf
>
> *There's no doubt about it, pharmaceuticals are being detected in the environment and there is genuine concern that these compounds, in the small concentrations that they're at, could be causing impacts to human health or to aquatic organisms …*
>
> *Recent laboratory research has found that small amounts of medication have affected human embryonic kidney cells, human blood cells and human breast cancer cells. The cancer cells proliferated too quickly; the kidney cells grew too slowly, and the blood cells showed biological activity associated with inflammation…*
>
> *There's growing concern in the scientific community, meanwhile, that certain drugs – or combinations of drugs- may harm humans over decades because water, unlike most specific foods, is consumed in sizable amounts every day …*
> Huffington Post, March 10,2008: Sex Hormones, Mood Stabilizers Found in Drinking Water of 41 Million Americans quotes Mary Buzy, Director of Environmental Technology for drug maker, Merck & Co. (pg.3)

A8-121
CONT

3. **The DEIR contemplates only secondary treatment of effluent.**

A8-122

As the Sierra Club has pointed out, "The evolution of state and federal standards for wastewater treatment has been heading in only one direction – up – and it is likely that tertiary treatment will be required by law by the time the Los Osos wastewater treatment project is completed. Morro Bay and Cayucos, with significant encouragement from the environmental community, saw that writing on the wall when they decided to upgrade their wastewater treatment plant to bring it into compliance with the Clean Water Act, and went beyond the current minimum of secondary treatment, mandating a tertiary component." Santa Lucian, vol. 46, No.1, January, 2009. A8-122 CONT

4. **Discussion of earthquake and soil saturation potential, impact and repair**:
   - Contamination of ground water from raw sewage release during an earthquake creating a public health risk
   - Pipeline joint separation during seismic settlement causing extensive repair and repetition of all construction health and safety issues
   - Liquefaction and earth slide during an earthquake creating a public safety risk
   - The **Broderson** area is subject to earth slides from heavy soil saturation

Ground lurching during an earthquake will cause gravity system piping to disconnect at joints, causing pipes to break releasing raw sewage into ground water thereby establishing a potential health safety risk. The issue of raw wastewater spills at pump stations, disposal sites and in waterways is mitigated under DEIR 5.7.B.1, pg. 5.7-21; however there is no discussion of groundwater contamination from raw wastewater as a result of seismic activity during an earthquake which would become a significant impact on public health and safety. Large gravity pipes are subject to upheaval, breakage and leakage. This is particularly true at the point of joint coupling, where, because of unsealed jointing, leakage is common.

Earthquakes initiate land slides and create areas of liquefaction in wet soils both of which have the potential for severe impact on gravity piping stability. The Central Coast is listed as a significantly active earthquake area and USGS maps indicate frequent seismic activity in the area. In addition, heavy soil saturation from heavy rains or disposal overload may result in earth slides into adjacent neighborhoods as evidenced by events in 1979 and mid 1980's in which homes on Highland Ave. were flooded with earth and water. Soil and water experts disagree about Broderson's ability to absorb and hold the amount of water slated for disposal there – estimated to be 400,000 g/d in the dry season and 800,000 g/d during the rain season. Wet season disposal will be anticipated to be compounded by additional rains and rain runoff from higher elevations above the Broderson site. A8-123

A statement from Larry Riao, Earth Systems and soil studies, Cal Poly, SLO:

> *The statements given describing the groundwater conditions are very general and do not adequately characterize the complicated and quite variable system that it is. There are numerous perched water tables located throughout the stabilized sand dunes areas of Los Osos. These "perched" water tables in the stabilized sand dunes have edges; the water flows to the edge and travels down to the next one. So there is both vertical and horizontal movement of water through these lenses. These clay lenses were formed in the low lying areas in the middle of the sand dunes when there was no where else for the water to go. The fines in the sand would be washed to the bottom of the dune during rains and form a clay or silt lense. But the layer is limited in size; it has edges. I have drilled hundreds of borings and placed piezometers (perforated pipes installed in borings for measuring depth to groundwater) and have found that the depth to groundwater is quite variable and difficult to predict. I drilled one lot where there was high water at the front of the lot (8-feet) but could not find any on the back of the lot (deeper than 25-feet), and the lot was relatively level. When the dunes would shift during the heavy and constant winds (think of Oceano Dunes) these lenses would be covered. Even an 1/8-inch layer of silt will hold water. Now there could be many thin layers on top of each other with wind blown sand between them.*

And these layers aren't as solid as you might think. After it rains, the silt layer will dry out and start cracking, and the edges will curl up. You have probably seen this in other low lying areas like after a pond dries up. So if you have many of these types of layers on top of each other, all of them with some wind blown sand between them, they will hold water but not indefinitely. They really just slow the water down to a trickle. That's why the water tables fluctuate so much in Los Osos, because the water is percolating slowly through these lenses. During the summer the water table lowers, and during the rainy season, they rise. But they only raise so much because of the edges. It would be like drilling microscopic holes in the bottom of a pot and putting the pot under the faucet and turning the water on slowly, the pot would eventually fill up and start flowing over the edge, so the water level would only rise to a certain level. Turn off the water, and the water would slowly drain but it may not empty before the water is turned on again.

A8-123 CONT

It was in some of these perched water tables that had test wells placed in for the Brown & Caldwell study. The problem is, that these perched waters are so variable and abundant, that there has not been a adequate study done to date to properly characterize this shallow underground water system. We also don't know changes in groundwater levels during the winter vs. the summer and during wet seasons vs. dry seasons.

Fugro Report, March 9, 2004 addresses the issue of earthquakes, liquefaction and seismic settlement at length:

5. **Mitigation for potential trench wall and roadway collapse**:
   - Applies to construction personnel, but may also impact the public

It's understood that risk to construction personnel is usually the responsibility of the employer/contractor, but as with any construction activity in a populated area (such as residential streets), involving heavy equipment, deep trench excavation, and potential flooding, there must be public safety consideration in place. The incidence and safety risk of trench wall cave-in, even in relatively shallow trenching, especially in sandy soil conditions is well understood. A quick Google search indicates it is a major concern in pipeline construction – it is in fact, one of the top four OSHA safety risks. To be considered are trenching width and risk of adjacent roadway collapse especially as it affects people moving in and out of their homes during construction.

The potential for caving in the dune sand will generally increase with depth, and length of the trench. It is our opinion that there is a potential for sloughing and caving of the trench sidewalls. Limiting the length of trench or installing temporary trench supports can be used to reduce the potential for caving. Trench shields or jackets shoring with plywood sheeting can be installed to support the trench walls during the placement of the gravel and pipe. Fugro West Geotechnical Report, Los Osos Wastewater Project, March 9, 2004 (6.7.1.2 pg.6-43)

A8-124

Relatively deep trenching will be needed to construct the sewer collection system pipeline. Even moderate caving in deep trenches can result in cracking of adjacent pavement to several feet or more beyond the sawcut line. Trench walls lacking adequate support could experience trench wall instability or movements that could damage adjacent pavements, utilities, or structures. Fugro West Geotechnical Report, Los Osos Wastewater Project, March 9, 2004 (6.1, pg.6-1)

A recent New Times article titled "Trench Deaths" about an industrial accident involving pipeline construction states: "(Paul) Satti, (Technical Director) of the council (Construction Safety Council) explained that trenches and other excavation accidents are among the top four Occupational Safety and Health Administration concerns..." (New Times, Vol.24, No.25, January 15-22, 2009, pg.11

6. **Discussion of prevention measures for overflow/spill of contaminated raw sewage**:

The issue of raw wastewater spills at pump stations, disposal sites and in waterways is mitigated under DEIR 5.7.B.1, pg. 5.7-21by the use of containment and other measures, however there is no discussion of prevention protocols for overflow, spill and leakage of raw wastewater. Power outages and heavy storm overload can cause backup, overflow, spills and leakage at pump stations and manholes releasing sewage onto surface areas where it becomes a public health risk. In all matters, involving measurable risk, it is in the interest of all concerned to employ the precautionary principle. To that end, adequate storage capacity, back-up generators and routine maintenance measures would potentially prevent the mentioned health risks as well as clean-up costs, hazardous disposal and RWQCB fines.

> "The panel also concurs…the collection system for the Los Osos Wastewater Project should: Provide the greatest possible protection against overflows and other releases of partially treated or untreated wastewater from the system, which could pollute Morro Bay and other sensitive coastal ecosystems."
> NWRI, Final Report, San Luis Obispo County Los Osos Wastewater Project, October 23, 2008
>
> "…fail-safe systems must be required, including back-up generators and sufficient storage capacity to deal with electrical outages and protracted storm conditions." Testimony of Ellen Stern Harris, Executive Director of the Fund of the Environment, Submitted for the 2/26/03 Public Workshop of the DWR/SWRCB/DHS 2002
> Recycled Water Task Force and The Environmental Justice Coalition for Water
>
> In a document titled: Regional Board Analysis Of Enforcement Criteria Established section d.6 of Order No. 2006-0003-DWQ, Item 16, Attachment 6. (December 12, 2007)
> The RWQCB ruled to prosecute the City of Oceanside for negligence for anticipating an illegal discharge due to pipeline failure citing, among other remedies, "Preventative maintenance (including cleaning and fats, oils and grease (FOG) control: Installation of adequate backup equipment: and Inflow and infiltration prevention and control to the extent practicable." (pg.3)
>
> In addition the City of North Bend, Final Comprehensive Sewer Plan, July 2001 recommends a root cutting program, grease trap inspection program, video inspection program to monitor the overall structural condition of the system, a lift station maintenance program and an inflow and infiltration analysis program to ensure that the necessary overloading of the wastewater treatment plant is avoided.

A8-125

OTHER CONCERNS INCLUDE:

7. **Health impacts of total air pollution from diesel powered equipment and vehicles**:

Diesel exhaust emissions have serious health consequences, particularly among children, the elderly, those suffering from emphysema and asthma and other impaired respiratory systems.
In fact, chronic obstructive pulmonary disease (COPD) is the fourth leading cause of death in the U.S. Although mitigation for impaired air quality, specifically for NOx, which exceeds allowable thresholds during the construction phase for all four projects are listed in Air Quality, DEIR Section (5.9-27, 5.9-28) this information should be cross referenced with Public Health and Safety, Section I.

A8-126

8. **Identification of alternatives to methanol**:

Methanol is added to wastewater to provide a carbon food source for the denitrifying bacteria which convert nitrates to nitrogen gas in sensitive aquifers. The EPA began a study of the carcinogenic effects of methanol in 2002 to be completed in 2010. Although an Italian study has identified methanol as a human carcinogen, more study will be necessary to be conclusive. (Canadian C+2 Petrochemical Report, Vol.25. Issue 2, Feb. 2008).
Since methanol would be an ongoing issue with the Step treatment system and is listed as having a potential

A8-127

significant health and safety impact, it appears it would be possible to mitigate for this risk by recalculating the greenhouse gas (GHG) impact from more recent data, by employing one of several alternatives to methanol or re-evaluating the necessity for methanol in Step effluent treatment. The Methanol Institute states "Through the implementation of efficiency improvements, and through replacing of older facilities with newer plants that use more efficient technologies, over the last decade methanol plants have been able to significantly reduce CO2 emissions by up to 40%: some facilities report emissions as low as 0.54 tonnes of CO2/tonne of methanol produced. This is equivalent to emitting 3.8 lbs. of CO2 per gallon of methanol."

Methanol is partly dependent on crude oil prices, and although petroleum prices have come down in the past few months, it is still a finite, politically driven commodity, subject to potentially volatile pricing. The study below lists high fructose corn syrup as the most cost effective alternative.

> "Methanol is commonly used as a substrate in teritary denitrification systems. The addition of methanol for denitrifiction is based on its biodegradability and availability, but methanol also has some disadvantages, including its potential for evaporative loss, a resulting danger of spark ignition, and the effect of evaporative losses on the surrounding air quality. These concerns have resulted in increasingly strict legislation in Southern California regarding the storage and use of methanol…An alternative substrate to methanol was sought for tertiary detrification. High fructose corn syrup (HFCS) was identified as the most cost effective alternative, which would also be much safer to handle. This should also render HFCS subject to less legislation at all levels of government." (pg. 3479)
>
> Water Environment Foundation, 2006: Give Your Denitrification Bugs a Sugar High, Coenraad Pretorius, Rudy Kilian, John Jannone
>
> Carollo Engineers, P.C., 10540 Talbert Avenue, Suite 200 East, Fountain Valley, CA 92708, USA, Eastern Municipal Water District, 2270 Trumble Road Perris, CA 92572-8300, USA

A8-127 CONT

Another consideration is: "Facultative ponds will always require an add-on treatment process for denitrification, regardless of the wastewater collection method …STEP can also be fed into an oxidation ditch prior to an anoxic zone. STEP raw effluent does have carbon for denitrification and the quantity is constant. Additionally, if required, supplemental carbon source could be added at this point." (Mike Saunders, Orenco)

The methanol issue could be eliminated by combining STEP with oxidation ditch treatment.

9. **Emergency response to residents in construction zones:**

Construction contractors appear to have an emergency response plan for construction workers in place, but there doesn't appear to be a plan for emergency access for residents who reside in the construction area. A8-128

10. **Safety measures for pedestrian traffic on unlit streets at night during construction.**

Pedestrian traffic often continues until very late evening as people walk to the bay from their homes. Los Osos streets are unlit and, on moonless evenings, it can be very dark with severe visual limitations. This can be easily mitigated but the issue isn't addressed. A8-129

QUESTIONS AND COMMENTS TO BE ADDRESSED

1. Why was air quality not addressed and mitigated in DEIR Section I since emissions exceed allowable standards in all four projects during the construction phase and takes place in residential areas, some A8-130

with heavy pedestrian and bike traffic as well as other outdoor activities? How many truckloads for soil removal will be required for each project? 1. Why was air quality (specifically diesel exhaust from diesel powered equipment and vehicles not cross referenced in Section I? A8-130 CONT

2. How will trench walls be secured? How will public safety be ensured? Directional boring would eliminate the risks of collapse, worker injury, insurance costs, most soil disposal including much of the effluent contaminated soils (a result of the disturbance of effluent encased within soil lenses). Please explain how the projects under consideration offset these issues. A8-131

3. The 1994 Northridge earthquake gravity system repair took about 14 years to make the system operational and some repairs continue to the present. By contrast, most small pipe water lines were functional within about 24 hours. Los Osos is in a seismically active zone. With the always present risk of earthquakes, the separation/breakage/leakage of large pipes and subsequent health risk, the cost of reconnecting/rebuilding the system how, incorporating these points, please explain the advantage of large pipe rather than sealed, flexible small pipe? A8-132

4. How does the County plan to upgrade water as regulations expand? Cost is cited for the County's reason not to clean water to tertiary standards, but it is clear that this will become a future requirement (Morro Bay elected to include tertiary ahead of regulations). How will this be paid for at some future date? It is understood that the County intends to refer water quality issues to RWQCB and local purveyors, but as overseer of County health and environmental issues and, the increasing imperative to plan, test, monitor and address for emerging contaminants all analytical testing, toxicological testing and epidemiological research must become a priority in which all parties are held to a higher health and environmental standard. Because the project that is chosen can have a significant impact in many quality-of-life facets for Los Osos residents, please discuss the issues of tritium, and endocrine disruptors along with other frequently prescribed pharmaceutical's that are showing up in water supplies and how the County plans to meet stricter water quality regulations. A8-133

5. What are the prevention protocols for raw sewage/effluent surfacing at manholes and pump stations due to power outages, heavy storm overload/runoff, and earthquakes and why were they not included in the analysis? If there is no prevention plan, why not? Again, small, sealed piping would eliminate raw sewage spills and flexible pipe would significantly reduce joint separation/breakage/leakage, greatly reducing health risks additional costs from contamination. A8-134

6. Land slides can and are life threatening events. Storm incidence and earthquake probability make this a probable eventuality. What is the County's clean-up plan? How will homeowners be protected physically and financially? In addition, homeowners may find themselves ineligible for flood insurance through an added safety risk from a County design. How will this be addressed? A8-135

7. Were alternatives to methanol researched? If so, what were they and why were they eliminated? Is the use of methanol calculated in the comparison between projects? How was it weighted and how did it affect the selection outcome for the preferred project? What is the County plan in anticipation of climate change demands and greenhouse gases as they become increasingly regulated? A8-136

8. Construction contractors appear to have an emergency response plan for construction workers in place, but there doesn't appear to be a plan for emergency access to residents who reside in the construction area. Is there an emergency response plan for residents in construction zones? How/when will the public be notified? A8-137

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9. Pedestrian traffic often continues until very late evening as people walk to the bay from their homes. Los Osos streets are unlit and, on moonless evenings, it can be very dark with severe visual limitations. This can be easily mitigated but the issue isn't addressed. Safety measures for pedestrian traffic on unlit streets at night are easily mitigated, such as continuous barriers with flashing lights. What is the plan? A8-138

10. How do you plan to deal with endocrine disruptors, 4-dioxin, 1,2,3 tri-choloropropane, and tritium (Los Osos proximity to Diablo) along with other more commonly used pharmaceuticals? How does the County plan to upgrade water for recharge as regulations expand? Based on fact, observation of environmentally progressive WW projects such as Arcata, CA., and common sense what upgrades in environmental laws, climate change, water protection, emerging health concerns and health safety regulation does the County project having to deal with in the next ten years? A8-139

LOCAC DEIR REVIEW

TRAFFIC AND CIRCULATION
DEIR Section 5.8 and Appendix J

SUMMARY

Due to the quiet and isolated nature of Los Osos, the community will be significantly impacted by truck traffic and movement of equipment during construction. Moreover, the Highland/ Broderson area will also be seriously impacted during the re-construction of the Broderson leach fields every five to ten years.

DISCUSSION

The community will be significantly impacted by truck traffic and movement of equipment during construction, which is estimated to be 16-24 months long. The Highland/ Broderson area will also be seriously impacted during the re-construction of the Broderson leach fields every five to ten years. This may include hauling up to 6,300 truckloads of rock from Santa Maria to Broderson, and hauling contaminated soil from Broderson to a waste disposal site. This will also have an impact on air quality and noise.

Los Osos is well known for its maze of streets that are not paved throughout their length. Many streets turn into impassable dirt roads, then re-emerge as a paved street. The authors of the DEIR apparently relied on inaccurate maps when discussing traffic and circulation for collection routes. For instance, Dr. David Dubbink states in his report on Traffic: "The traffic analysis makes the mistaken assumption that 9th and 10th Streets are through connections to Santa Ysabel. This error would be significant if the project was expected to generate substantial traffic. The 'dogleg' connections to 7th and 11th Streets would reduce capacity."

We believe that this error is indicative of the consultants' use of out-dated, inaccurate, and incomplete sources of information, which may have economic and environmental impacts on the Project.

QUESTIONS AND CONCERNS TO BE ADDRESSED

1. The TMP includes notification to residents as the proposed sewer project moves from area to area: How will notification occur? Will the County ask contractors to hand-deliver notices? Will local residents have a convenient way to ask for clarification or call-in concerns and get answers? A8-140

2. The traffic analysis did not include any discussion on how many workers will be commuting into Los Osos daily. Was the number of employees commuting into and out of Los Osos factored into the traffic impacts? A8-141

3. Are there any other staging areas besides the one at Pismo and South Bay Blvd.? Where will 200 + employees park their vehicles? This could be a significant impact for 16-25 months. A8-142

* David Dubbink, Ph.D., Professor of City and Regional Planning at Cal Poly, San Luis Obispo; environmental planner; founder, owner of Interactive Sound Information Systems, a company that has worked with US military, FAA, National Park Service, etc. on noise management programs.

LOCAC DEIR REVIEW

AIR QUALITY
DEIR Section 5.9 and Appendix K

DISCUSSION

The DEIR discusses both gaseous and particulate air pollutants, with special emphasis on greenhouse gas (GHG) producing aspects of construction and operations. Table 5.9-1 on SLO County's Annual Emissions (tons/ day) raises several questions about sources of high levels of emissions that are not clearly identified, including "Miscellaneous Process" area-wide, and "Other" mobile sources.

Assumptions and their repercussions: In its discussion of the current situation in Los Osos, the DEIR makes several assumptions from which it derives significant impacts to air quality. For instance, currently we have 4,281 septic tanks, which includes schools and businesses. The DEIR assumes that they have an average capacity of 1,500 gallons and that they are pumped every 5 years. Assuming that hauling trucks have a capacity of 3,000 gallons, this computes to 428 loads of sludge to Santa Maria per year.

Given that the majority of the existing septic tanks belong to residences, we might adjust the assumptions. If we assume that the average capacity is 1,200 gallons (most residential tanks are 1,000 gallons), and that the average period between pumping is 7 years, the resulting calculation would indicate that we currently average only 245 truck trips to Santa Maria per year – a significant difference of 57% less than the DEIR's assumptions.

Thresholds of Significance: According to CEQA guidelines, the Thresholds of Significance are intended to determine if impacts have significant environmental effects, including:

- Conflict or obstruct implementation of existing Air Quality Plan
- Violate or contribute to violation of Air Quality standards
- Result in cumulative "considerable net increase" of any criteria pollutant which exceed quantitative thresholds for ozone precursors
- Expose sensitive receptors (schools, seniors, people with health problems, etc.)
- Create objectionable odors affecting a substantial number of people
- Conflict with the County's General Plan

Both long-term (operational) and short-term (construction-related) emissions must be evaluated. THE SLO Air Quality Handbook of 2003 (SLOAPCD) indicates the following levels of significance;

- Less than 10 pounds per day of ROG, NO_x, SO_2, PM_{10}; OR less than 550 pounds per day of CO = *NO SIGNIFICANT IMPACTS*
- From 10 to 24 pounds per day of ROG, NO_x, SO_2; OR PM_{10} has potential to cause significant air quality impacts but can be mitigated on-site = *LESS THAN SIGNIFICANT* IMPACTS

The conclusion of the DEIR is "The proposed project would not emit a significant amount of toxic or hazardous air pollutants; would not result in the release of a significant quantity of diesel emissions during its operation; and does not involve any remodeling or demolition activities." (Special Conditions, p. 5.9-8) However, it does indicate that further analysis is required regarding the treatment plant site at Giacomazzi due to its proximity to a preschool and its potential to cause odors.

Greenhouse Gas: CEQA states that the project must "evaluate potential environmental effects based to the ***fullest*** extent possible on scientific and factual data." Based on the California Office of Planning and Research (OPR) established thresholds of significance, the DEIR states: "LESS THAN SIGNIFICANT or NO IMPACTS were found related to the project causing impacts to be applicable air quality plan, violating an air quality

standard or substantially contributing to an existing or project air quality violation, creating objectionable odors, hindering a GHG Emissions Plan, or violating goals or policies of the County's General Plan." (p.5.9-8)

Table 5.9-3 Air Quality Significance Determination compares Proposed Projects 1, 2, 3, and 4. Considering the significant differences in the collection systems and site for the treatment plant site, it would seem that differences would be evident. However, the DEIR finds that ***all*** projects have the same impacts.

Project-specific impact analyses: Project 1 (STEP collection, Giacomazzi/ Branin treatment plant site) assumptions include:
A collection point at the Midtown site (former "Tri-W")
4,679 new septic tanks (compared to existing 4,281 tanks)
129,000 linear feet of 4" lateral pipes
31,600 linear feet of 6", 8", or 10" PVC main pipes (in street)
203,600 linear feet of pressurized main (approximately half of it trenched)
18,700 linear feet force main from Midtown to out-of-town plant site (Giacomazzi)

Why does Project 1 assume the necessity of having a central collection point?
Why should it be at the Midtown site (which is not the most efficient place to put it)? A8-143

Based on assumptions on employee commute, excavation trips, trips to contractors' yards, and trips to the job site, the DEIR concludes that "construction of collection system (STEP/ STEG) in Proposed Project 1 would contribute to potential significant NO_x and PM_{10} emissions impacts." (Table 5.9-4)

Is this conclusion substantiated by an outside source who is expert in the construction of STEP collection systems? A8-144

Septage Receiving Station is assumed in all proposed projects. However, according to the Technical Memo on Regional Septage Receiving, it is not economically feasible to build a septage receiving station at the LOWWP, regardless of the project selected. **A septage receiving station will never be able to compete with the Santa Maria location or pay for itself in fees, even if it serves a STEP LOWWP and other septic tanks in Los Osos.** A8-145

The DEIR evaluates the air quality impacts relating to Project 1's treatment plant and disposal components, and concludes, "Therefore, Proposed Project 1 would result in potential significant NO_x and PM_{10} emissions impacts during construction of the facilities at the disposal sites", and "at the treatment plant site." (p. 5.9-15) The DEIR later reiterates the same conclusion for Projects 2 and 3.

Project 4 has higher construction and operation emissions than the other 3 proposed projects in all areas of air quality. (Tables 5.9-5 and 5.9-9) **Yet, the DEIR has determined that this is the preferred project. Why?** Project 4 has a longer force main from town to the treatment plant site (28,500 linear feet to Tonini), resulting in exceeding the pounds per day and tons per quarter thresholds for NO_x and PM_{10}. In spite of this, the DEIR concludes that Project 4 has less than significant impacts from collection, treatment plant, and disposal. A8-146

Sensitive Receptors are identified as those who would be particularly sensitive to air quality pollution. The DEIR indicates that a plant site at Giacomazzi is within .2 miles of residences and .4 miles within a preschool, which potentially could be exposed to substantial pollutant concentrations during construction. Broderson is within .2 miles west and .3 miles south of residences which could be affected during construction - and reconstruction every 5 to 10 years - of the Broderson leach fields. This is a serious concern to the residents of this highly dense area.

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Mitigation of air quality concerns is discussed in Table 5.9-10. The DEIR indicates that water trucks or sprinklers will be used during construction to keep down the dust. The usage of water will increase when winds exceed 15 mph. The DEIR emphasizes that reclaimed (non-potable) water should be used whenever possible. **In light of the Severity Level III of the Los Osos Groundwater Basin, we urge the County to *avoid* impacts, rather than mitigation for them, and to reduce the need for watering/ dewatering whenever possible.** A8-147

The DEIR recommends actions for revegetation and soil stabilization of areas impacted during construction as soon as possible. **We recommend that Low Impact Development strategies be employed during road restoration (after installation of collection system), rather than traditional curbs and gutters.** A8-148

The DEIR states that contractors shall have someone who monitors air quality at all times, including weekends and holidays. **We strongly recommend that the contact information for this contractor be available to the LOCSD.** A8-149

QUESTIONS AND COMMENTS TO BE ADDRESSED

1. **We ask that the assumptions for air quality and their repercussions, particularly for greenhouse gases, be more fully explained and scrutinized.** A8-150
2. Considering the significant differences in the collection systems and site for the treatment plant site of the four proposed projects, it would seem that differences in air quality impacts would be evident. However, the DEIR finds that ***all*** projects have the same impacts. **Please explain why.** A8-151
3. **Why does Project 1 assume the necessity of having a central collection point? Why should it be at the Midtown site (which is not the most efficient place to put it)?** A8-152
4. The DEIR concludes that "construction of collection system (STEP/ STEG) in Proposed Project 1 would contribute to potential significant NO_x and PM_{10} emissions impacts." (Table 5.9-4) **Is this conclusion substantiated by an outside source who is expert in the construction of STEP collection systems?** A8-153
5. It has been stated in TAC meetings that the project constructions period for STEP and gravity collection systems is significantly different. Gravity construction will take approximately two years, where STEP will take approximately 6 months. Since construction activities have the potential to expose sensitive receptors to substantial pollutant concentrations, **why was this difference not discussed in the DEIR? Please provide a more complete analysis reflecting this difference.** A8-154
6. It is not economically feasible to build a septage receiving station at the LOWWP, regardless of the project selected. **Why is this built into every proposed project? How does this contribute to the project's success in light of sustainability and affordability?** A8-155
7. **Project 4** has higher construction and operation emissions than the other 3 proposed projects in all areas of air quality. (Tables 5.9-5 and 5.9-9) **Yet, the DEIR has determined that this is the preferred project. Why?** A8-156
8. **In light of the Severity Level III of the Los Osos Groundwater Basin, we urge the County to *avoid* impacts, rather than mitigation for them, and to reduce the need for watering/ dewatering whenever possible.** A8-157
9. **We strongly recommend that Low Impact Development strategies be employed during road restoration (after installation of collection system), rather than traditional curbs and gutters. Please provide a revised design and recommendation that includes this approach.** A8-158

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10. The DEIR fails to analyze the alternatives for renewable energy sources for the operation of the treatment plant site and disposal sites. **We request a full analysis of alternative energy sources and their potential to generate revenue.** A8-159

11. **We strongly recommend that a point of contact who monitors air quality be available to the LOCSD at all times.** A8-160

LOCAC DEIR REVIEW

NOISE
DEIR Section 5.10 and Appendix L

SUMMARY

Most concerns regarding noise would occur during construction. These include noise from truck traffic, including construction of in-street mains and Broderson leach fields; risk of structural damage resulting from pile driving during construction; and impact of noise on sensitive wildlife. According to Dr. David Dubbink, heavy trucks have the same acoustic impact as ten cars.

DISCUSSION

The DEIR indicates that noise levels will exceed County standards but considers them "less than significant." Given the generally quiet nature of the community of Los Osos, the entire residential neighborhood within the Prohibition Zone is considered a "sensitive receptor," as well as the surrounding Morro Bay Estuary and the Cuesta Inlet Area. The construction phase of the Project will have the most significant impacts. In a separate report to the County (attached), Dr. David Dubbink* explains how vibration from pile driving operations exceeds the Peak Particle Velocity (PPV) threshold for residential housing. This is a significant potential impact for affected neighborhoods since there may be structural damage of houses and accessory units. LOCAC defers to Dr. Dubbink's report for his expertise in this area and requests responses to his queries and conclusions.

Construction noise associated with installation of the Broderson site includes the excavation of soil and installation of rock/rip-rap and other associated facilities. Truck traffic will be concentrated at the intersection of Broderson and LOVR. The noise associated with truck traffic going to and from Broderson is of extreme concern to residents in the immediate area.

In addition, the impact of construction-related noise on wildlife in our sensitive, habitat-rich area was not considered in the DEIR, in particular, the impact of noise relating to pile driving during construction. Dr. David Dubbink has indicated that noise levels of pile driving far exceed the regulatory limits relating to wildlife during the nesting season, which covers five months of the year.

* David Dubbink, Ph.D., Professor of City and Regional Planning at Cal Poly, San Luis Obispo; environmental planner; founder, owner of Interactive Sound Information Systems, a company that has worked with US military, FAA, National Park Service, etc. on noise management programs.

QUESTIONS AND COMMENTS TO BE ADDRESSED

1. What are the significant noise effects of pile driving operations, and how will they be addressed? How does the County intend to alert residents of the possible noise impacts associated with pile driving operations? What mitigation, if any, will be included in the Final EIR? A8-161

2. If pile driving operations are employed, how will the County address vibration effects on existing structures? Has the County determined who will accept the liabilities relating to physical damage to existing structures? A8-162

3. Why did the DEIR fail to consider noise effects on birds, fish, mammals, and the entire natural habitat surrounding Los Osos? How will this be addressed in the Final EIR? A8-163

4. Will the neighborhood be advised of impending truck traffic and construction noise? How will the County address this noise factor at a neighborhood level? A8-164

Noise Issues and the Los Osos Wastewater Treatment Project DEIR
Prepared by David Dubbink

The noise study prepared for the wastewater project lacks relevant content. It doesn't address the central issues facing Los Osos. Rather than reciting the report's shortfalls this discussion focuses on what should be done to minimize noise impacts on residents and the natural environment.

The first step is to describe the acoustic setting.

Los Osos is a quiet place without major roadways or industry. The 1898 town plan featured a grid of 25 by 125 foot lots. This affects the acoustic environment in several ways. Some parcels have been combined to make larger building sites but there are many narrow lots. Neighbors are close and putting distance between noise sources and listeners isn't an option in many cases. The street layout didn't consider the undulating dune topography and through travel isn't possible on many of the streets. Some have never been paved. While the resulting pattern bewilders newcomers, it effectively slows traffic and reduces community noise levels. The irregular shoreline of the Morro Bay estuary contributes another layer of community segmentation. It also makes environmentally sensitive habitat areas and protected wetland areas part of the community fabric. A8-165

In summary, the town is unusual in several ways. Los Osos is a *quiet environment* but much of the *housing is closely packed*. Development is interspersed with *important natural resource areas*.

The next step is to identify the project features with a potential for producing noise problems. We'd look for things that produce lots of noise or for things that might be bothersome to people or to wildlife.

A partial list of noise sources includes the following:

- Construction activity, particularly the use of a pile driver associated with the gravity collection system. Presumably, this would have to do with construction of pumping stations next to the Bay.
- There are those OSHA backup beepers attached to heavy equipment that would be sounded during construction. They would also be sounded during operations particularly in association with the regular pumping of STEP tanks.
- Generators are used during construction. They also are part of the operation plan for collection systems. They provide standby power for pump stations during power outages. The previous plans for the gravity collection system included a number of pocket pumps that would not have standby power. During a power outage, a truck-mounted generator would circulate among the pump stations providing power to run the pumps long enough to empty each station's reservoir. This isn't mentioned in the DEIR project description but is likely to be part of the package.
- Chapter 7 (page 7-24) of the DEIR says that, with the STEP system, there will be noise from alarms mounted at each of the 4769 tanks and noise from intermittent septage pumping. Another section of the DEIR it is said that failure notifications will be managed through "telemetry" (page 3-47).[3] While there

[3] The methodology for "telemetry" is unexplored in the DEIR and conversations with project staff and STEP equipment providers indicates there is no consensus on how this would be managed. Connections might be through the Internet, through phone lines or by fiber optic cable. Any of these technologies potentially involves costs to homeowners and could have environmental impacts.

is nothing about either the alarms or the septage pumping in the project noise analysis these do deserve attention.

- The STEP system also includes 630 "air vacuum valves" that produce intermittent air releases.

Addressing the Issues

The following sections are organized according to the listing of potential noise sources listed above. It isn't practical to attempt to forecast the exact levels of noise impacts but this doesn't make it impossible to develop useful and workable impact mitigations. We can certainly improve on both the relevance and quality of those presented in the EIR draft. The strategy is to present the mitigations in the form of performance criteria.

Construction Noise and Vibration

There is one huge issue that looms above all others in considering noise impacts from construction activity. The project description says that pile drivers could be used in constructing the footings for pump stations. The EIR's acoustic study addresses the issue but doesn't provide useful mitigations.

Vibration is measured by several metrics but the one common to the most relevant reports is "PPV" or peak particle velocity measured in inches per second. The shaking is dampened by distance from the source and different types of soils behave differently. Water saturated, sandy soils conduct more of the vibration energy than average soils.

The noise study projects that a pile driver will produce a PPV of .644 measured 25 feet from the source. It also says that the significance threshold for vibration is any activity producing a PPV level above .2. The DEIR doesn't report where this threshold comes from but it is likely from a publication by the Federal Transit Administration that is the source of other information in the DEIR. The FTA report incdicates that there is a likelihood of damage to non-engineered timber and masonry buildings when vibration velocity exceeds the PPV .2 level. The FTA report goes on and gives the PPV levels when other types of buildings reach a vibration damage threshold. For engineered concrete and masonry buildings (no plaster) the level is .3. For reinforced concrete, steel or timber buildings (no plaster) the PPV level is .5. In other words, the DEIR's forecast vibration level for pile driver operations is, at 25 feet, in excess of the damage criteria for every building type. A8-166

Caltrans developed its own threshold criteria for evaluating vibration. The damage criteria are stated for newer and older structures and residences. For "modern industrial/ commercial buildings the PPV threshold level is .5 which is the same as in the federal report. For newer residences the level is also .5. For older homes the PPV threshold is .3. For historic and old buildings the level is .25 that is a bit higher than the threshold set in the FTA study. Still, in the case of all building types, the pile driving is likely to damage Los Osos structures.

The most interesting thing about the Caltrans study is that, in addition to assessing the likelihood of structural damage it has a table describing human annoyance potential. The threshold for perceptible vibration is .01. Vibration is "strongly perceptible" at PPV .1. It is rated as "severe" at .4.

The noise levels associated with pile driving are significant too. An "average" pile driver produces sound at a 101 dB level heard at a distance of 50 feet. This is greater than the takeoff sound generated by a contemporary commercial jet heard at an elevation of 1000 feet. A person shouting from 3 feet away produces sound at around the 85 dB level. The limit set in the county's noise ordinance is 70 dB for stationary noise sources.

The pile driving is likely to crack buildings in Los Osos, the vibration will annoy everyone and the sound levels will be well in excess of county standards.

The noise study in the DEIR reports no information of how the vibration or noise levels might impact the natural environment but this is a major concern. There is a wealth of information on this topic. A8-166 CONT

Mitigations

Pile Driving

AVOIDANCE is the fundamental mitigation strategy for activities with environmental impacts that exceed acceptable thresholds. The Caltrans report cited above lists seven alternatives to pile driving that can reduce vibration and noise to acceptable levels. Such strategies are certainly justified for a community of closely spaced, older homes. The proposed pile driving sites are also spaced along at the shore of a natural area of recognized value and this also supports the need for avoidance. A8-167

The DEIR's response to the high potential for damage from pile driving is to pass responsibility for damage to the contractor. They are directed to survey the neighborhood and work with homeowners to document before and after conditions. The contractor is to pay for necessary reconstruction. Obviously, the assumption of such open-ended liability will increase the price of construction.

Other Construction Noise

When the DEIR discusses the noise from pile drivers or the noise produced by other construction equipment everything is treated in terms of averages. This obscures the variation that exists between equipment from different manufacturers or of equipment of differing ages. The DEIR study relies on tables taken from the FHWA's construction noise model. The performance data used in the model is, in turn, taken from Boston's "Big Dig" project where they formed the centerpiece of a program to minimize disruption from construction noise. In the Boston noise regulation program the "averages" served as the *upper limits* for the permitted noise from various types of equipment. Contractors were required to produce basic noise plans identifying the equipment that would be used and steps that would be taken to limit noise output. There also was a monitoring program to insure that conditions were being respected (inspectors could stop work if they were not). Information about all of this is available and could be easily adapted to the wastewater project. A8-168

The DEIR sidesteps the problem of construction noise by invoking the County's noise regulations that exempt construction noise as long as it occurs during specified periods. It is interesting that the FTA criteria specifically address the problem of relying on local ordinances.

Generally, local noise ordinances are not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should take into account the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use.

Transit Noise and Vibration Impact Assessment Federal Transit Administration 2006

The Federal Transit Administration reference undermines the DEIR's solitary reliance on the county's noise regulations to substantiate the notion that somehow the project's noise impacts are less than significant because they are exempted from regulation by the county's ordinances. But the environmental impacts don't go away. And CEQA specifically includes the regulatory standards of other agencies. The FTA and Caltrans criteria referenced above apply to a broad range of construction equipment and it is entirely appropriate to propose mitigations that are consistent with these standards.

The OSHA beepers

One element of the Boston program required that the sound level of the OSHA beepers be modulated according to background levels. They could be 5 dB louder than background but not more. Current models of beepers are adjustable and some are even designed to automatically vary sound output with ambient background. Adoption of the Boston condition would mitigate potential problems in the quiet Los Osos setting and still offer the necessary margin of worker safety. A8-169

Generator Noise
The DEIR adopts a performance standard approach in dealing with noise from generators. In proposing mitigations for the noise from the backup units it states that noise should not exceed a 45 dB level at the nearest residence. The condition is slight misreading of the county's requirement that measurements be done *at the property line* but the strategy is still workable. The mitigation condition should apply to generator noise both during construction and operations, including mobile units. The 45 dB property line standard needs to be evaluated for workability but noise at that level would be less than significant. A8-170

STEP Alarms
A tank alarm would be designed to be audible and 5000 of these going off at random intervals throughout the community would be a significant problem. The mitigation would be AVOIDANCE. The telemetric system (assumed to exist in some sections of the DEIR) should be made a condition. A8-171

Septage Pumping
The pumps will make noise and, with the close proximity of homes, there will be noise issues. The Boston approach of requiring use of quieter equipment is a reasonable mitigation. To support this, a survey of available equipment would need to be made but this is not technologically daunting and manufacturer information may be available. A8-172

Air Vacuum Valves
This offers the same opportunity for resolution as the septage pumping issue. The DEIR says the pressure release will be imperceptible but provides no supporting information. Hopefully the DEIR analyst has data to substantiate the valve's inaudibility. It should be made a procurement standard. A8-173

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AGRICULTURAL RESOURCES
DEIR Section 5.11 and Appendix M

SUMMARY

The Tonini site was not evaluated in the Fine Screen Report, and its discussion in the DEIR is insufficient. Of the alternative treatment plant and disposal sites, Tonini has the highest rated soil – Prime Agricultural Class II – compared to Giacomazzi/ Branin (Class III).

It also has the greatest number of acres affected – 145.47 acres of a total of 646.6 acres - compared to Giacomazzi/ Branin, which have a total of 80 acres, of which 24-28 usable acres would be affected. Therefore, Tonini results in the greatest loss of agricultural acreage. (Land Use – C, Fine Screen, Section 6.3)

It is anticipated that any effluent applied to Tonini would only be treated to secondary levels. Toxins and emerging contaminants would percolate into the soil, contaminating Class II agricultural land and making it unusable for future crops. A8-174

The total cost of 646.4 acres would most likely exceed the Giacomazzi/ Branin site area of 80 acres.

Furthermore, the use of spray fields should only be considered as a temporary, short-term, emergency alternative for disposal of treated effluent. (Anything applied to Tonini will be lost to the groundwater basin permanently.) Hopefully, agricultural reuse contracts will be negotiated promptly, reducing or eliminating the need for spray fields at Tonini. In this event, Tonini would become a "stranded asset."

DISCUSSION

The conversion of agricultural land to other uses and loss of agricultural revenue, constitutes an "Unavoidable Impact" that leads to the need for "Findings of Overriding Consideration." These findings will be carefully crafted to withstand a legal challenge. Basically, they will state that the proposed project has an immediate and overwhelming public need for the proposed waste water project, and that loss of land can be compensated for with an "Ag Exchange." Further, locally sensitive areas and uses can be protected via fences and buffer zones.

Under the discussion "Project-Specific Impacts Analysis" (DEIR pg.5.11-6) reference is made to Tables 5.11-7 and 5.11-8, neither of which are included in this DEIR Section but are located in Appendix M. Of the four properties under consideration, only the Tonini site has the highest rated soil: Prime Agricultural. If one combines the Soil Rating classes of Prime and Statewide Significance for the Tonini site, the total of 145.37 acres far exceeds any of the other sites under consideration. When you add Locally Important, Potentially Important Soils and Grazing the total for Tonini is 646.40 acres, while the total for all of the other three sites is less than 50 acres.

The proposal is to remove 175 acres from Agricultural Use. Mitigation includes a minimum of 175 acres of replacement land to be located nearby and assigned a permanent conservation easement or other similar status to the County or other appropriate entity. However, this action will not completely compensate the public for loss of prime agricultural land and therefore, the Board of Supervisors will have to approve special findings of "Overriding Consideration." So far the argument for doing this seems to be that there are no other appropriate areas for spray fields.

LOCAC DEIR REVIEW

The Williamson Act is a voluntary program. One way to "opt out" is to pay forfeited taxes or stiff penalty fees. Typically the land owner pays, However, if the County enters an agreement to purchase Tonini, there is room for negotiations such that the landowner may demand the penalties be absorbed by the County.

QUESTIONS AND CONCERNS TO BE ADDRESSED

1. How can the purchase of the highest quality prime agricultural land, Tonini, be justified for sprayfields, given its short term usefulness? A8-175

2. Why weren't all the reuse alternatives that affect agricultural land included equally in this DEIR section and the appendix? A8-176

3. Who will pay the farmland conservation easement mitigation (AG-1) penalties, since the DEIR states that "The project proponent will have to pay for administrative costs incurred by the easement holder (of the exchanged land)." (DEIR Pg. 5.11-11)? A8-177
    a. Who is the project proponent- CSD or the County or someone else?
    b. Have "administrative costs" been estimated? What are administrative costs and who will they affect?

4. Who will pay the Williamson Act "opt out" taxes or penalties, should they be imposed? The DEIR does not say who is going to pay those penalties? No discussion is included in the DEIR. Wouldn't the payment of these fees affect the total cost of the project? A8-178

5. Of the alternative treatment plant and disposal sites, Tonini has the highest rated soil –Class II Prime Agricultural, compared to Giacomazzi/ Branin, Class III. Why does the DEIR select Tonini as a preferred site for treatment? (Land Use - C) A8-179

6. Applying effluent that has only received secondary treatment to Tonini spray fields may render this prime agricultural land unusable for crops for generations. What is the mitigation plan for this loss of prime agricultural land? What are the associated costs for mitigation? (Groundwater - D) A8-180

7. Impact 5.11-B (p. 5-11-15) appears to have a misprint. It should be: "The project *would* conflict…." , instead of "*would not* conflict". A8-181

8. Misprint on p. 5.11-3 under section 5.11-5. Should be "Appendix M-1" instead of Appendix N-1." A8-182

LOCAC DEIR REVIEW

VISUAL RESOURCES
Section 5.12 and Appendix N

SUMMARY

Visual impacts at the proposed Broderson site, an 8 acre leach field, are not accurately portrayed. This site will require cyclone fencing, some out buildings, night time lighting and removal of mature trees. In the 2003 Montgomery Watson Herza report, the project area was located mid way up the hill. This proposed project is approximately 200 feet above residential homes and will be visible to many residents from their Highland Drive back yards as well as from Broaderson Avenue residents and from travelers headed southerly up the street.

No detailed information is presented on what the visual affects would be. Photos provided in the DEIR (Exhibit 5.12-4) are from unique angles, such that they do not represent the true views that would be experiences by Broderson area and from Cabrillo Estates. Photos 1 and 2 are attached as adjunct visual evidence.

Mitigation measures include revegetation of the leach field every five years following the required removal and replacement of the leachfield disposal area.

The existing mature Eucalyptus trees, with several distinctive groves, have been a visual monument for years. The habitat they create serves wildlife as well as local residents who walk paths in the area, horseback riders and children who play amongst the trees. These mitigation measures are not now available since the requirement is to provide a landscape plan at a later date.

The 2003 project used an area mid way up on Broderson, yet the current leach disposal area is much closer to homes and Highland Drive, and may necessitates the removal of many of the historic Eucalyptus groves. Without detailed plans, no one can tell what the Broderson site will look like from surrounding views and views from as far as the Morro Bay State Park.

The Gravity Collection System for projects 2, 3, and 4 requires a central collection point and pump station. This pump station would be above grade with the approximate dimensions of 25 by 14 feet and approximately 17 feet in height. According to the County the pump will be housed in a “residential style” building. The exact location is not indicated, but it appears to be somewhere in the vicinity of the Library. This may present a visual impact, but would require mitigation similar to the above landscaping.

The DEIR does not compare project components, so it should be noted that Project 1 (basically the prior Ripley plan) does not include the Mid-town site and would not have a visual impact. Because there is no need for sprayfields in the Ripley plan, there would be no visual impacts at Tonini.

At Tonini (and the other three sites) the visual comparisons are again misleading using photos from distances that don’t depict what one would see from Los Osos Valley Road or Turri Road.

LOCAC DEIR REVIEW

Since Turri Road is now listed as a scenic corridor (Estero Area Plan), it includes both the Tonini property and the Morros. Views of the current agricultural setting will be altered with cyclone fencing, industrial buildings, holding ponds and sprayfields.

DISCUSSION

1. **Where are the details about tree removal at Broderson?** See photos 1 and 2 below. A Photoshop rendition of what the leach field area would look like with trees removed, fencing and industrial leach area and outbuildings would more clearly address the visual impact. A8-183

2. Page 3-14 states: "None of the four proposed projects includes the Mid-town site as a *treatment* plant site; however, three of the four proposed projects (Proposed Projects 2, 3, and 4) include a small portion of the Midtown site (0.1 acre) to construct an underground central pump station to pump all the wastewater collected from the Los Osos Wastewater Service Area (see Exhibit 3-2) to the treatment plant."

3. The description on page 5.12-48 describes Projects 1-4 stating that "Project elements would primarily consist of ground level elements such as storage ponds, which would minimize visibility." A8-184
   This is a misleading statement. Why would this statement stand? It should be modified to include all fencing, lighting, buildings or other construction.

4. Proposed Project 1 includes the Mid-town site as a central collection point for the wastewater, but it does not require a pump station at Mid-town to pump the collected wastewater to the treatment plant. Sufficient pressure would be provided by the individual STE pumps for each connection.

   Page 5-12-5 DEIR: Impact 5.12-C: The project would substantially degrade the existing visual character or quality of the site and its surroundings. Following construction, the Mid-town parcel would include a pump station that would be above grade. However, the size of this facility would not be sufficient to degrade views of the surrounding area. Therefore, long-term impacts would be less than significant at the Mid-town parcel. A8-185

   Do Projects 2, 3, and 4 require an underground pump station or an above grade pump station at the Mid-town site?

5. 5.12.6 - Mitigation Measures, 5.12-C2: A final landscaping plan shall be prepared for the entire project site and approved by the County prior to building permit issuance. Said landscaping plan shall emphasize native plant materials and shall include sufficient planting to screen views of the project from nearby roads and residential developments. The landscaping plan shall visually integrate the project into the rural landscape, while preserving and enhancing existing views. A8-186

   Why not provide a typical building plan that indicates what will be developed at the Mid-town site and a typical landscape plan for both Broderson and Mid-town?

6. **On the Mid-town site there appears to be a full revegetation project for the entire 11 acres. Is this correct? This needs more definition, as does any revegetation of other project areas.** See photo 3 below for view of corner for proposed sewage transfer station. A8-187

LOCAC DEIR REVIEW

7. **Will the Broderson leach fields sustain native plants in soil that is disturbed and changed and wet most of the year?** A8-188

8. Mitigation 5.12-C1 states that construction staging areas shall be located away from sensitive viewing areas to the extent feasible. Sensitive areas are defined as viewing corridors and residences. A8-189

   There is no description or location included in the DEIR. Where are the staging areas?

9. If the Broderson site is used for effluent disposal, it is important to evaluate compliance with the new DHS Groundwater Recharge Reuse criteria (because there is no vadose zone and there would be intentional recharge to the upper aquifer, which has historically been used for potable supply). (NWRI Final Report December 4, 2006) A8-190
   Will Broderson require future harvest wells? If discharge rates exceed 448 AF at Broderson and harvest wells become required, what would be the visual impacts of the wells?

Photo 1. Broderson site Eucalyptus and Cypress trees that will most likely need to be removed.

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Photo 2. Looking down from Cabrillo at the Broderson trees.

Photo 3. Visual of corner for proposed sewage transfer station.

LOCAC DEIR REVIEW

ENVIRONMENTAL JUSTICE
DEIR 5.1 3 and Appendix O

SUMMARY

None of the proposed projects have a disparate impact on any disadvantaged group. None of the proposed projects conflict with the environmental justice goals or policies of any jurisdictional agencies.

DISCUSSION

Environmental Justice is defined in California law (Government Code 65040.12 as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies." (p. 5-13-2, DEIR Appendix O)

This section does acknowledge that there will be a **disparate financial impact on low income households**. However, by regulatory definition, affordability is not an environmental effect.

Title 14 California Code of Regulations (CCR) Section 15131 provides that **economic or social information** may be included in an EIR, but those economic or social effects shall not be considered significant effects on the environment. (DEIR, Appendix O, p. 5.13-7, emphasis added)

Disparate impact occurs when a disadvantaged group (i.e. low-income and/or minority status) is harmed more than other groups. This appendix concludes that no disadvantaged group will be harmed more than any other group, excluding the affordability issue.

This section concludes that there are no adverse effects or impacts that are appreciably more severe in magnitude, or are predominantly borne by any segment of the population. (Appendix O, p 5.13-8)

The DEIR states that there is no conflict with any applicable environmental justice goals, or policies of an agency with jurisdiction over the project. (Appendix O, p 5.13-8)

LOCAC DEIR REVIEW

ALTERNATIVES
Section 7 and Appendix P

SUMMARY

Wastewater treatment requires three components: Collection, Treatment and Disposal.

In the DEIR Statement of Purpose it follows this order: to "evaluate the potential environmental impacts associated with a wastewater collection, treatment, and disposal system for the community of Los Osos (Los Osos Wastewater Project, or, LOWWP)."

However, Appendix P reverses the order of consideration, making it difficult for the reader to follow. Also, there is little discussion of the alternative collection options, which are 70% of the overall cost of a complete system. There is no analysis of the pros and cons of the collection system options.

The discussion concludes that all components have equal potential to work in any combination. Reviewing best systems, rather than components, would give a better view of the potential environmental impacts. This analysis makes that impossible.

The DEIR describes the 'Criteria for Development' of the project objectives, including the following:

(3) "Mitigate impacts of the LOWWP on water supply and saltwater intrusion." And, "further the wastewater project will maintain the widest possible options for beneficial reuse of treated effluent."

(4) "Minimize potential environmental impacts on the Los Osos community and surrounding areas."

(5) "Meet the project water quality requirements while minimizing life-cycle cost."

The analysis fails to address #3. The DEIR criteria development also wasn't applied to the collection alternatives (#4 and #5). The collection component of a system has the highest potential to affect cost, ground water quality, safety objectives for Morro Bay, operation and maintenance, installation time, and lifecycle costs. There are important comparisons that haven't been made. A8-191

DISCUSSION

Presently the prior MWH Gravity collection has received top support by the County as being "shovel ready" to receive approval from any new government infrastructure funding. Because this funding is for green technology, there should be a better analysis of the alternative collection options. The failure to clearly review the STEP, Vacuum, and Low Pressure systems does not seem prudent.

11 ~ 3.1 Wastewater Treatment Process Alternatives

ISSUE: This section defines 7 treatment technologies yet fails to compare the STEP effluent treatment to the gravity raw sewage treatment differences. It also fails to connect the amount of sludge potential for each technology. This could range from no sludge facultative ponds to daily truckloads to Santa Maria for most of the other plant treatments. There is also no reference to the footprint or energy efficiency of these 7 systems. This information should be included in the description for more clarity. A8-192

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13 ~ 3.2 Effluent Disposal/Reuse Alternatives

ISSUE: This section describes 7 methods of disposal but fails to discuss footprint and energy costs. There needs to be a professional review of the Broderson disposal plan as it may not return enough water to the lower aquifer to make it financially reasonable, compared to other disposal options. A8-193

13 ~ 3.3 Candidate Siting Alternatives

The following candidate sites can be located and viewed using the provided APN number on the interactive GIS map maintained by SLO County: http://www.sloplanning-maps.org/ed.asp?bhcp=1

Figure 1: Summarizes the locations of the proposed treatment plant sites considered for the LOWWP.

ISSUE: Twelve locations are presented with no differentation between land costs, feasibility to impact ESHA vs quality of farmlands (Class 1 soils vs Class 3). Several of the locations fell to the bottom of the list in the prior EIR and should be noted. Andre was the environmentally preferred site in the prior EIR.

ERROR: This section fails to describe what value the Mid-Town site, and its mitigation property on Broderson, have as a treatment plant facility/disposal site. The County's preferred projects all use the Mid-Town location as a receiving site for collection and lift pump station, yet only the proposed Gravity collection system, as previously designed, might need a portion of this 11 acre parcel or Broderson. STEP, Vacuum, and other collection systems DO NOT require use of either the Mid-Town site, Broderson, or Tonini in their design. The Mid-Town/Broderson sites have huge costs associated with them and this should be discussed up front. The properties could be sold to recover monies previously spent on the LOWWTP for the purchase of more appropriate properties. A8-194

Also Tonini is outside of our aquifer and the most distant. This needs to be noted. Spray fields will waste ALL of our treated effluent guaranteeing the advance of salt water intrusion.

16 ~ 3.4 Biosolids Disposal Alternatives

ERROR: There is much discussion for the Biosolids handling but it is never associated with the different treatment technologies. Therefore, there is a failure to address the impacts of NO SLUDGE production from the ponding treatments. This is a glaring failure and must be corrected for a fair analysis. If a STEP collection delivers only 10% of the solids and a tank is pumped every 7 years, what is the treatment cost from septic 90% pre-treatment vs. the daily accelerated treatment of a full treatment plant? These are green questions that deserve an answer before this EIR is complete. A8-195

18 ~ 3.5 Collection System Alternatives

Conventional Gravity Collection System (GS): GS systems are the most common wastewater collection systems. This type of system is also referenced as a solids-handling (SH) system. They consist of gravity sewer lines with a minimum diameter of 6- or 8-inches and manholes at change of grade or direction, or at intervals of approximately 350 feet. GS systems convey both solids and liquids. A conventional gravity system requires lift stations and pump stations to move sewage to a treatment plant site.

MISSING: The depth of the collection pipes (on an angle from 8-23 ft deep), the dewatering of trenches, correct angle for conveyance, and sometimes complicated lateral connection resulting in street disruption, danger of renching in sand and the necessary location of trenching in the middle of roadways due to the raw sewage A8-196

conveyance (vs. pre-treated effluent) involving 42 miles of roadway damage. A8-196 CONT

Septic Tank Effluent Pumping System (STEP): STEP systems convey septic tank effluent (STE) only; they do not convey solids. They use septic tanks at individual service connections to retain the solids. STEP systems use pumps at each septic tank to pressurize the collection system and convey the STE to a main pump station or treatment facility. The collector lines are small diameter (2- to 4-inch) that feed into larger interceptors.

MISSING: Fails to address that 90% of the solids receive pretreatment in a Septic Tank. Fails to represent that STEP is trenchless and can go in the rights-of-way instead of the roadways. Fails to describe the conveyance of pre-treated effluent vs. raw sewage, certainly a health and safety issue. Fails to define the low energy use of the pumps that pressurize the system. Fails to describe the length of construction times between Gravity and STEP. STEP is estimated to take six months to install, Gravity could take 2-3 years to install. A8-197

Septic Tank Effluent Gravity System (STEG): STEG systems are similar to STEP systems, but do not have individual pumps at each septic tank; conveyance is by gravity. However, since solids are not conveyed, pipe diameters are smaller than for GS systems and manholes are not used in the system.

MISSING: Fails to describe that STEP/STEG is a COMBINATION of pressure and gravity where available. This combo could greatly reduce the energy costs of installing a STEP system. It also fails to describe directional boring installation (trenchless) and describe the depth of the pipes (4-5 ft) that can go in the right of ways, not disturbing most of the 42 miles of roadway. A8-198

Vacuum System (VS): VS systems rely on vacuum stations to create a collection system that operates under a vacuum. There is a vacuum/interface valve and small retention facility at each service connection that opens when the retention facility is full and allows the solids and liquids to be conveyed to the main vacuum station. Vacuum systems are closed systems where the pipes can follow the natural grade and can be smaller diameter than in GS systems.

MISSING: Fails to describe the size of the ‘small retention facility’ at each connection and the fact that several homes could share one ‘retention facility’. Fails to describe the number of main vacuum stations compared to the Gravity lift stations. Fails to clearly describe how the vacuum can convey the raw sewage in small pipes directionally bored. This system also has far less impact on the 42 mile roadway system and is not described. A8-199

Low Pressure Collection System (LPCS): LPCS use individual grinder pumps at each connection that grind up solids and convey the resulting slurry to a treatment site or pump station. LPCS are similar in design and operation to STEP systems, except that no individual septic tanks are used and both solids and liquids are conveyed for treatment.

MISSING: Fails to describe the type of grinder pumps and where they would be located. This system ALSO avoids major destruction of the roadways by being directionally bored at a shallow depth. A8-200

CONCLUSION: This section confuses the pros and cons by NOT ADDRESSING the most important areas of concern and comparison. It completely leaves out that the STEP and STEP/STEG systems both utilize a Septic Tank as part of their collection and that this tank is part of the TREATMENT system and solids collection also. A8-201

It fails to address the transport of raw sewage vs. pretreated effluent.

LOCAC DEIR REVIEW

It complicates the discussion of sludge handling by not differentiating 7-10 yr septage solids collection from individual tanks vs. daily sludge production of the other systems. A8-202

It also leaves out other major factors by placing cultural, energy, water disposal/re-use, cost, air pollution, dewatering during construction, traffic and circulation, public health and safety and geology for review in separate Appendices.

It also has left out any discussion of mini plants. The EPA recommended this type of solution when they visited Los Osos in the early 1990s. They opposed installing a Gravity system calling it "over-kill" and not appropriate technology for our community. A8-203

19 ~ Section 4: Criteria Development

One of the objectives of the current Tech Memo is to identify the criteria that will be used in the subsequent analyses for screening the alternative project components. The resulting subset of components will be used to define the project alternatives that will be analyzed in the DEIR. The criteria to be used in evaluating alternative components are based on the LOWWP project objectives. These objectives were developed to address the major issues that are driving the LOWWP. The project objectives are as follows:

1. Alleviate groundwater contamination – primarily nitrates;
2. Address the issues of water quality defined by the Regional Water Quality Control Board through its issuance of Waste Discharge Requirements (WDR) for discharge limits;
3. Mitigate impacts of the LOWWP on water supply and saltwater intrusion. Further, the wastewater project will maintain the ***widest possible options*** (emphasis added) for beneficial reuse of treated effluent;
4. Minimize potential environmental impacts on the Los Osos community and surrounding areas;
5. Meet the project water quality requirements while ***minimizing life-cycle costs*** (emphasis added); and
6. Comply with applicable local, state, and federal permits, land uses, and other requirements, including the Local Coastal Plan, Environmentally Sensitive Habitat Areas (ESHA standards), State Marine Reserve, and archeological concerns.

PROBLEM: This criteria leaves out ECONOMIC IMPACT. It also contradicts discussions about re-use by removing most of the Treated Effluent re-use criteria and delegating it to the water purveyors through the Interlocutory Statutory Judgment (ISJ). Failure to make re-use a component of the project design and criteria will likely result in furthering salt water intrusion by shifting this responsibility to purveyors who may take years to resolve water re-use. It is assumed the empty lots will pay for purple pipe in order to build out their property. This is not a responsible plan because it A8-204

LOCAC DEIR REVIEW

GROWTH INDUCING IMPACTS
DEIR Section 6

SUMMARY

The DEIR states that construction and operation of the Los Osos Wastewater Project could result in direct growth inducement because the project will lead to the removal of the discharge moratorium within the Prohibition Zone. Although the RWQCB may lift the moratorium, it is not likely that growth will occur quickly due to the restrictions in the Water Conservation Ordinance in effect at this time. In fact, unless the wastewater project considerably reduces the rate of seawater intrusion, it is likely that some kind of building moratorium will continue to be in effect in Los Osos due to the limited water supply. In addition, without an HCP, it's unlikely that building will occur.

However, placing the treatment site far out of the town of Los Osos may cause the town to expand if enough precautions are not put in place to prevent the sprawl. This section lists many factors that will influence and limit future growth, but there is no mitigation section that requires these to be implemented.

The DEIR is using old population data and growth rates to determine the size of the wastewater facilities and the population that it will serve. The Estero Area Plan Draft Update of 2004 proposed a significantly lower buildout maximum of 19,713 for all of Los Osos vs. 28,688 that comes from the older plan. One of the reasons that the Coastal Commission has not approved this plan yet for Los Osos is because of the uncertainties in the buildout figures that may still be too high, due to the water shortage and water quality issues in the water basin. Sizing the plant based on older population data and higher water usage figures that do not take current conservation rates into consideration will be a direct growth inducing impact.

DISCUSSION

1. **Table 6-2, Buildout Population and Housing Data, is outdated and should be replaced with data based on the 2000 Census and the current Housing Element Update (2008).**
   Using the older data will cause the wastewater facilities to be oversized and be an inducement to growth. Oversizing the plant will encourage serving areas outside of the prohibition zone and outside of the town. A8-205
2. **Because the treatment plant will be placed outside of town, with the potential for inducing growth to the east, why were mitigations not included for this section?** There is a list of factors that will limit growth, but specific ones should be included as mitigation; e.g., agricultural easements that restrict properties from extending service lines, greenbelt and open space designations, and careful sizing of the capacity. A8-206
3. **As a protection against potential growth inducement, we strongly recommend the use of conservation easements along the pipeline from town to the treatment plant**, which would prohibit hook-ups along its length. A8-207

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Los Osos Community Advisory Council, Carole Maurer, January 30, 2009 (Letter A8)

Response to Comment A8-1

This comment states that the primary objective of the proposed project should be protection of the groundwater quality and supply. The two primary objectives of the project, as stated in Section 2, Executive Summary, of the Draft EIR, are to address the issues of water quality defined by the Waste Discharge Requirements (WDR) for discharge limits issued by the RWQCB and alleviation of groundwater contamination—primarily nitrates—that has occurred in part because of the use of septic systems throughout the community. These two objectives are treated equally throughout the Draft EIR.

Response to Comment A8-2

This comment is concerned that the proposed project will have a negative impact on the Los Osos groundwater basin. Section 5.2 of the Draft EIR and Appendix D-1 provide an impact analysis for groundwater resources. Impact 5.2-A provides an impact discussion of groundwater supply within the existing aquifers and Impact 5.2-B provides an impact discussion of groundwater quality. This comment also states that the project should not have a negative impact related to seawater intrusion. As stated in the first paragraph on page 5.2-19 of Appendix D-1, the proposed disposal of treated effluent at Broderson would reduce the current rate of seawater intrusion into the lower aquifer, thus resulting in a beneficial impact. See Response to Comment A7-22.

Response to Comment A8-3

This comment expresses a concern regarding the costs of the proposed project. See Topical Response 2, Project Costs, regarding the operation and maintenance costs, and overall project costs.

Response to Comment A8-4

This comment expresses a concern regarding the lack of discussion regarding the economic impact to local small businesses. See Topical Response 2, Project Costs, regarding overall project costs.

Response to Comment A8-5

This comment expresses a concern regarding the lack of discussion regarding potential hidden costs associated with the harvest well at the Broderson site. See Topical Response 2, Project Costs regarding overall project costs.

Response to Comment A8-6

This comment states that the Draft EIR uses outdated reports and information, including reliance on old population data (1990 census). Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-7

This comment states that the Draft EIR relies on information from past studies, rather than conducting studies employing recent technologies. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-8

This comment states that the impacts associated with the loss of septic tank discharge could potentially result in irreparable damage to the basin. The comment is noted.

Response to Comment A8-9

This comment stated that the Draft EIR did not consider the loss of habitat associated with the elimination of the septic water leaching from the existing septic tanks. As described on page 5.2-19 in Appendix D-1, the implementation of the proposed project would reduce septic effluent discharge into the perched aquifer. However, the exact quantity of reduction within the perched aquifer is unknown, and the potential impact on groundwater flow to surrounding surface water features is speculative given the amount of perched groundwater currently flowing to surface water features is not known. As a good faith effort to obtain measurement data, groundwater levels will be monitored to understand potential changes in groundwater levels. Therefore, as a project design feature and previously agreed to by the California Coastal Commission, the County will review and approve a Groundwater Level Monitoring and Management Plan detailing methods for measuring and responding to changes in groundwater levels that could affect wetland hydrology and habitat values. In accordance with the monitoring and action plan proposed by the LOCSD, the Plan shall include provisions for monitoring groundwater levels, surveys for wetland plant and animals, monitoring wetland hydrology and water quality, appropriate response procedures should impacts be identified, annual reporting, and an education program to encourage property owners to covert septic systems into areas capable of groundwater recharge.

Response to Comment A8-10

This comment stated that the Draft EIR did not analyze aggressive conservation strategies as well as the potential impacts to the groundwater basin and seawater. As described on page 3-42 in the Draft EIR, each of the proposed projects includes a conservation strategy that achieves the target of 10 percent per capita of water conservation. In addition, Appendix D-1 provides a discussion of the potential impacts to the groundwater basin and seawater.

Response to Comment A8-11

This comment expresses a concern regarding the lack of discussion associated with collection system alternatives. See Topical Response 5, Alternative Collection Systems.

Response to Comment A8-12

This comment expresses a concern that the Draft EIR fails to fully analyze the varying life cycle costs and replacement costs for gravity and STEP systems (Project Description Appendix B). Life cycle and replacement costs are discussed in the Carollo Engineers Fine Screening Report (incorporated by reference to the Draft EIR). See also Topical Response 2, Project Costs, and Response to Comment P36-37.

Response to Comment A8-13

This comment expresses a concern regarding the lack of discussion associated with the impacts of Inflow and Infiltration. See Topical Response 10, Infiltration, Inflow, and Exfiltration.

Response to Comment A8-14

The comment expresses a concern that the Draft EIR did not address the potential for the gravity collection system to result in the long-term potential for buckling after settlement. Page 5.4-9 in the Draft EIR and Page 5.4-18 in Appendix F-1 state that potential seismic-related ground failure could be significant. Mitigation Measures 5.4-C1, 5.4-C2, and 5.7-B1 are recommended to reduce potential seismic-related ground failures to less than significant.

Response to Comment A8-15

This comment expresses a concern that the longer time for construction activities associated with the gravity system were not adequately discussed in the traffic, noise, and air quality evaluations. The thresholds for traffic and noise are based on daily impacts while the thresholds for air quality are based on daily and quarterly impacts. The construction greenhouse gas impacts were based on total construction emissions while the operational greenhouse gas emissions were based on annual emissions. Mitigation measures were provided to reduce potential significant impacts based on the threshold timeframe identified above.

Response to Comment A8-16

This comment expresses a concern that the Draft EIR fails to analyze the impacts of the Tonini site for the wastewater treatment plant. In the course of developing the Preferred Project described in Appendix Q, and Sections 1 and 2 of this Response to Comments document, additional studies and analysis is performed on the Tonini site. Some of the new studies for the Tonini site are: Appendix Q.7 contains a new geotechnical report; Appendix Q.9 is a cultural resources field investigation, Appendix Q.6 is a sprayfield disposal rate study and there have been additional biological resources studies performed (Appendix Q.8). In addition, more detailed layouts of the treatment facilities, sprayfields, seasonal storage, and architectural design standards have been developed for the site (see Appendix Q.3, Preferred Project Description).

Response to Comment A8-17

This comment states that Tonini has a higher rated soil (Class II) than Giacomazzi/Branin (Class III). Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-18

This comment states that the use of Tonini results in the greatest loss of agricultural acreage, compared to Giacomazzi/Branin. Placing the treatment plant at Giacomazzi/Branin would increase the amount of agricultural acreage because the Tonini site is a required element of all four alternatives, given the need for the sprayfield.

Response to Comment A8-19

This comment states that applying secondary treated effluent may render prime agricultural land unusable. See Topical Response 4, Tertiary Treatment, regarding agricultural re-use.

Response to Comment A8-20

This comment expresses a recommendation for the use of conservation easements along the pipeline from town to the treatment plant to protect against potential growth inducement. The comment is noted as this approach is expressed by the project team in numerous community meetings and will be pursed to the extent possible.

Response to Comment A8-21

This comment expresses support for the incorporation of tertiary treatment. The project is designed to accommodate tertiary treatment in the future in order to respond to any increase in standards of agreed upon reuse of treated effluent. Also see Topical Response 4, Tertiary Treatment.

Response to Comment A8-22

This comment expresses a concern regarding the lack of analysis for urban reuse at the Broderson site. See Topical Response 4, Tertiary Treatment, regarding the various re-use options for treated effluent.

Response to Comment A8-23

This comment expresses concerns about the potential permanent loss of water from the basin by not returning water from the wastewater treatment process. The reader is referred to Topical Response 3, Water Resources and the Project Scope. Over the past two years, following the guidelines of the Court approved Interlocutory Stipulated Judgment; the County has met with the community, the purveyors, environmental, agricultural, and cultural groups, and each regulatory agency to develop a solution that is the best possible outcome for the community considering the complexity of the challenges. Developing a wastewater project for Los Osos must be based on the practical realities of the challenges the community faces; the roles and responsibilities of the County, the purveyors, the public, the Courts, regulatory agencies and others; and with the clear understanding that solving all issues will not be accomplished with a single project—that multiple issues exist and that the County's multi-faceted approach and process is the most viable.

Response to Comment A8-24

This comment expresses a concern about the lack of full analysis for Agricultural and Urban reuse of recycled water. See comment A8-23 above. Further discussion of these issues is also contained in Topical Response 4, Tertiary Treatment, and Topical Response 8, Broderson Leachfield.

Response to Comment A8-25

This comment expresses an opinion that the use of Broderson for leachfield disposal and recharge of the aquifer is questionable. In addition, this comment states that the use of Broderson would pose series risks of liquefaction and landslide. Section 5.2 of the Draft EIR and Appendix D-1 provide a

discussion of the use of Broderson and its effects on recharging the aquifer. In addition, Section 5.4 of the Draft EIR and Appendix F-1 provides a discussion liquefaction and landslide potential at the Broderson site. As stated in Draft EIR Appendix F-1, Expanded Geology Analysis, Impact 5.4-C, if the depth to groundwater is greater than 100 feet below the existing ground surface at Broderson, and except for the near surface loose sand dune and deposits, the deeper soils encountered beneath the site is generally dense and not susceptible to liquefaction or seismic settlement. The near surface loose dune sand would not be considered potentially liquefiable because even in the event the near surface loose dune sand were saturated by precipitation or effluent disposal at the time of an earthquake, the groundwater depths would not rise near the ground surface at the Broderson site. Therefore, the proposed facilities at Broderson would not change the potential for liquefaction or seismic settlement to occur within the soils because of the effluent disposal system and estimated mounding at the Broderson site.

Response to Comment A8-26

This comment expresses a concern regarding the quality of the Los Osos aquifer and groundwater. See Topical Response 4, Tertiary Treatment, regarding the costs associated with tertiary treatment.

Response to Comment A8-27

This comment expresses a concern regarding the lack of discussion regarding emerging contaminants. See Topical Response 2, Project Costs, regarding the overall project costs.

Response to Comment A8-28

This comment stated that the Draft EIR did not fully analyze the impacts associated with the risk of liquefaction and landslide at Broderson. Impact 5.4-C in Section 5.4 in the Draft EIR and in Appendix F-1 provides a discussion of potential liquefaction impacts. In addition, Impact 5.4-D in appendix F-1 includes an analysis of potential landslide impacts. Also see Response to Comment A8-27 regarding liquefaction and landslide impacts.

Response to Comment A8-29

This comment expresses concern that the Draft EIR did not address the noise, traffic, and air quality impacts associated with reconstruction activities at Broderson. As referenced, the Broderson leachfields are anticipated to require reconstruction activities approximately every 5 to 10 years. The Draft EIR did not specifically address the reoccurring impacts. These impacts would either be similar or less than those impacts that were addressed for the initial construction activities at Broderson.

The equipment used for reconstruction would be similar or less than the equipment used for initial construction. Therefore, noise impacts every 5 to 10 years would not be greater than the noise impacts that were evaluated in Section 5.10, Noise, in the Draft EIR and Appendix L-1 of the Draft EIR, with the initial construction of the Broderson leachfields.

The reconstruction activities are expected to result in fewer truck trips than those assumed during initial construction activities. Therefore, traffic volumes would not be greater than those evaluated in

the Section 5.8, Traffic and Circulation, in the Draft EIR and Appendix J, Traffic and Circulation, of the Draft EIR, for the initial construction of the Broderson leachfields. However, given that the potential truck trips associated with reconstruction would interact with automobile traffic, Mitigation Measure 5.8-A.1 would also be required for reconstruction activities at Broderson.

Since traffic volumes and construction equipment use would not be greater than evaluated for the initial construction of the Broderson leachfields, air emissions associated with reconstruction would not be greater than the emissions identified in Section 5.9, Air Quality, of the Draft EIR and Appendix K-1 of the Draft EIR. Similarly, the air quality mitigation measures identified for construction activities (i.e., Mitigation Measures 5.9-C1 through 5.9-C5) would also be required for reconstruction activities.

Response to Comment A8-30

This comment expresses a concern regarding the lack of discussion regarding potential hidden costs associated with the harvest well at the Broderson site. See Topical Response 2, Project Costs, regarding the overall project costs.

Response to Comment A8-31

This comment advocates additional water conservation strategies be employed to reduce demands on groundwater pumping. The comment is well founded in its principles. Water Conservation is an important part of the formal application package completed by the County in its submission of the Facilities Plan for the Local Coastal Permit application.

Response to Comment A8-32

This comment expresses a desire to consider stormwater as a resource. See Topical Response 11, Construction and Post-Construction Stormwater, regarding details needed for treatment plant site and other pump station sites.

Response to Comment A8-33

This comment states that the Draft EIR fails to explore green alternatives for renewable energy, ecological treatment technologies, and environmentally responsible sludge handling. Section 7, Alternatives to the Proposed Project, of the Draft EIR discuses the criteria used to screen potential methods to reach the goals and specific objectives for the LOWWP project. One of the important considerations in the Fine Screening Report was sustainability, defined in the Fine Screening Report as minimizing the LOWWP's energy consumption and reusing the treated wastewater effluent as a resource to benefit the community.

Response to Comment A8-34

This comment states that the construction of a septage receiving station is unnecessary. The project is anticipated to have the capability to receive septage generated by the portion of the Los Osos community that continues to use septic tanks. Septage receiving elements would be much simpler and smaller than what would be required for a regional facility. The ability to accept septage from the

community would reduce overall length of trips for septage trucks, thereby benefiting the communities overall traffic and greenhouse gas impacts.

Response to Comment A8-35

This comment expresses a concern with the primary objective for the proposed project. See Topical Response 3, Water Resources and the Project Scope.

Response to Comment A8-36

This comment expresses a concern with the objective of reducing nitrates in the groundwater. The project's success will be measured in its ability to meet the project objectives as stated in Section 2, Executive Summary, and Section 3, Project Description, of the Draft EIR. The determination that ceasing wastewater discharges is necessary to address nitrates was made by the Regional Water Quality Control Board, using their mandate and authority under the California Water Code. Whether ceasing wastewater discharges actually reduces nitrates in the groundwater and over what length of time this might occur, are measurements that would be applied by the regulatory agency (RWQCB). Other water quality impacts that have been attributed to septic tank discharges in Los Osos are affected similarly: the regulatory body is empowered to protect the waters of the State in the manner and approach that the regulatory agency believes will best address the issue. The project's role is to respond to the orders of the regulatory agency.

Response to Comment A8-37

This comment expresses a concern with the lack of explanation associated with the project scope being limited to the prohibition zone and not the entire Los Osos Community. The project is being designed to serve only the prohibition zone. If at some later date it is determined that the balance of the community should cease using septic tanks and join the project, then the costs of accommodating the increased flows would be borne by the additional users. The prohibition zone itself, including the various exceptions, was established by the Regional Water Quality Control Board, which is the agency empowered to make these determinations.

Response to Comment A8-38

This comment questions the population and housing figures use for the Prohibition Zone. Section 6 of the Draft EIR provides an evaluation of potential growth inducing impacts. Table 6-2 on page 6-2 of the Draft EIR identifies the population and housing data for areas within the Prohibition Zone and outside of the Prohibition Zone.

Response to Comment A8-39

This comment expresses a concern with the definition of the project life cycle. The purpose of the Draft EIR is to identify and disclose environmental effects, not project costs. Nevertheless, Appendix C of the Fine Screening Report (August 2007) provides detailed information on how all costs were developed. "Life-cycle" costs were developed by projecting those costs over a 30-year period, which matches the expected life span of many of the major project components. Although most major components of the systems will last longer than 30 years, their capital costs will have been fully paid

in that time frame or shorter. Where major components are not expected to last 30 years (such as liners in treatment and storage ponds) the component replacement costs over a 30-year period were included. This method also allows costs to include annual operations and maintenance costs, plus appropriate replacement costs, for the various alternatives. See Topical Response 2, Project Costs.

Response to Comment A8-40

This comment expresses a concern regarding the lack of discussion associated tertiary treatment and reuse. See Topical Response 4, Tertiary Treatment, regarding the cost and different re-use options for treated effluent.

Response to Comment A8-41

This comment expresses a concern about the lack of clarity in the use of terms in Section 3.2 of the Project Description. This comment is editorial in nature and not related to the information or analysis presented in the Draft EIR. No further response is necessary.

Response to Comment A8-42

This comment expresses a concern for the reliance on the Mid-town and Broderson sites for all project alternatives and the potential for a more centrally located central collection location. A pump station is shown at the Mid-town site because the current design for the gravity system moves all of the wastewater to that central point. Because the community has expended significant funds (approximately 6 million dollars) on the design of a gravity system, the alternatives in the Draft EIR replaced the treatment plant at Mid-town with a pump station. The 2001 LOCSD project would have used approximately 11 acres of the site for the treatment plant and amenities. A pump station at mid-town would use approximately a quarter acre.

Response to Comment A8-43

This comment expresses a concern about why the Mid-town site is needed for a STEP system since a central pump station is not required and suggests another site be used that would be closer to South Bay Boulevard. The comment is noted. Carollo Engineers Technical Memorandum "Out-of-Town Conveyance" (incorporated by reference to the Draft EIR) states that the central pump station is not needed for a STEP system but could be located at potential other locations depending on which pipeline route are followed to the treatment plant site(s). The actual siting of the central pump station becomes a final design issue that will be addressed in the Design-Build specifications of the project. The central pump station is shown at the Mid-town site in the Draft EIR to be able to assess fully environmental impacts associated with various options of pump station siting.

Response to Comment A8-44

This comment expresses a concern about population figures presented in the Draft EIR and suggests the population figures may be overstated. As documented in the Carollo Rough Screening Report (March 2007) Population Estimates are based on previous reports by Montgomery Watson Americas, Inc. (2001) and Ripley Pacific Company (2006)) using population estimates provided by the Los Osos Wastewater Committee. The estimates were based on the 1990 census and knowledge about

existing and future development. The build out population to be served by the future wastewater treatment facility was estimated to be 18,428 people. These estimates are consistent with the General Plan projections for Los Osos minus the areas outside the prohibition zone. The resulting wastewater flows are fully described in the Flows and Loads Technical Memorandum (November 2008). These figures are appropriately conservative in that population densities are likely to increase over the life of the project as communities throughout the nation, including San Luis Obispo County, adopt growth policies that focus additional population into existing urbanized areas. The Carollo Technical Memorandum "Flows and Loads" includes a sensitivity analysis to identify cost implications if changes were made to population and flow estimates.

Response to Comment A8-45

This comment expresses a concern about the number of discussions of all viable alternatives in the Project Description and requests additional rationale for why the four alternatives require use of the Mid-town site, use of Broderson and the Tonini site to meet project objectives. Section 3, Project Description, provides ample reference to Section 7, Alternatives to the Proposed Project, wherein the many alternatives for collection, treatment, and site locations are discussed. There is also reference to the Carollo Fine Screening Report, which also contains ample discussion of the alternatives considered. Regarding the use of Tonini sprayfields and Broderson leach fiends there is significant discussion in Section 3 and 7, and other referenced materials to form the basis of the land area needs for sprayfield disposal (175 acres) and leachfield operation (up to 448 acre-feet) to meet the effluent disposal needs of the wastewater treatment operation. See also Topical Response 7, Alternative Disposal Options and Topical Response 8, The Broderson Leachfield.

Response to Comment A8-46

This comment expresses a concern about costs and funding for only the project alternatives chosen rather than all alternatives presented during the rough and fine screening process. The comment questions whether other options are possible. As the overall process moved through various stages of analysis and synthesis many potential alternatives were eliminated from further consideration for a variety of reasons, such as environmental, inability to meet regulatory requirements, inability to meet water resource objectives, infeasible to build, community acceptance, adverse site characteristics, energy usage, and permitability, to name a few criteria. It would be counter-productive to develop cost information and funding strategies for alternatives that are not otherwise feasible. Section 7, Alternatives to the Proposed Project, of the Draft EIR discusses these criteria and the alternatives considered for the project. Further, as noted in the comment, the Rough Screening and Fine Screening Reports prepared by Carollo Engineers contains discussion about which alternatives will be developed further and which alternatives will not.

Response to Comment A8-47

This comment questions the description of project life cycle in terms of ongoing maintenance, operation and eventual replacement of facilities. These issues are addressed in Topical Response 2,

Project Costs, as well as the Carollo Fine Screening Report. See also, Response to Comment A8-39 for further information on life cycle costs.

Response to Comment A8-48

This comment addresses the intended use of the Draft EIR and questions why the comment is not made that the Draft EIR will be used by the public to assist in the survey. The comment references Section 3.4, Intended Uses of This Draft EIR. The intent of the Draft EIR is to assist the Lead Agency, San Luis Obispo County, assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed LOWWP. As such, a primary use of the Draft EIR is not to assist in a community survey. Rather, the Draft EIR provides relevant discussion and analysis that may be beneficial to the overall information provided to the community for their consideration in completing the Community Survey distributed by the County. The Draft EIR was completed and distributed for public review and comment on November 14, 2008 and the Community Survey was distributed by the County on February 18, 2009 along with the "Project Status Report" (which provides information for community residents to consider when completing their survey). Therefore, the Draft EIR was available for the public's use as they completed the survey.

Response to Comment A8-49

This comment expresses an opinion that the Giacomazzi site is better suited for the project than the other sites because its soils are of less prime importance. As discussed Draft Section 5.11, Agricultural Resources, in the Draft EIR and Appendix M-1, Expanded Agricultural Resources Analysis, the implementation of Proposed Project 4 which includes a treatment plant facility at Tonini would result in the impact to approximately 180 acres of agricultural crop production that is considered prime farmland. The implementation of Proposed Projects 1 through 3 would result in the loss of 191 to 203 acres of agricultural crop production that is considered prime farmland. The definition of prime farmland that is used within the Draft EIR is based on the definition established by the California Coastal Commission.

Response to Comment A8-50

This comment expresses a concern about the amount of time needed to develop a relationship between growers, the County, and others to use treated effluent for crop irrigation (use of tertiary treated effluent) and address the overall water supply issue. Topical Response 3, Water Resources and the Project Scope, and Topical Response 4, Tertiary Treatment, address the issues raised in this comment.

Response to Comment A8-51

This comment addresses concerns about recharge to both aquifers being enough to allow full buildout of Los Osos. The comment suggests there is inadequate discussion to show that there will be full recharge to the aquifers and that property owners in the Prohibition Zone may have expectations that building permits may be issued when the LOWWP is implemented. The purpose of the Draft EIR is not to speculate whether building permits may or may not be issued for work after implementation of

the LOWWP. Rather, the Draft EIR assesses the potential environmental impacts of the implementation of the LOWWP. Full discussion of aquifer recharge is located in Section 5.2, Groundwater Resources, and Appendix D-1, Expanded Groundwater Resource Analysis. Also see Topical Response 3, Water Resources and the Project Scope.

Response to Comment A8-52

This comment expresses a concern about the Project's compliance with the General Plan/Estero Area Plan regarding the potential need for a future water expansion project. The scope of the LOWWP is clearly related to the development of facilities for a wastewater collection, treatment, and disposal system to serve the community of Los Osos. It is not the purpose of the LOWWP to speculate whether or not future water projects should or should not be developed for the community. The reader is referred to Topical Response 3, Water Resources and Project Scope, for a more detailed explanation of the intent of the LOWWP addressing wastewater and saltwater intrusion issues.

Response to Comment A8-53

This comment does not address an issue in the Draft EIR. Rather, it poses a question of the County's ability to present buildout plan numbers if there is also the requisite ability to have full buildout. The comment is unclear in its intent and is editorial in nature and not related to the information or analysis presented in the Draft EIR. No further response is necessary.

Response to Comment A8-54

This comment expresses concerns about when buildout of the community will occur and whether or not sufficient water supplies will be available to support the buildout. The purpose of the Draft EIR for the LOWWP is environmental analysis of the development of a wastewater collection, treatment, and disposal system for the community of Los Osos. The analysis presented in the Draft EIR relates to that project, not other issues. Similar to A8-52 above, it is not the purpose of the LOWWP to speculate whether or not future water projects should or should not be developed for the community. The reader is referred to Topical Response 3, Water Resources and Project Scope, for a more detailed explanation of the intent of the LOWWP addressing wastewater and saltwater intrusion issues.

Response to Comment A8-55

This comment expresses a concern with the septic return flows and impacts associated with the removal of the septic tanks. Septic return flows utilized by the groundwater study were provided by the Fine Screening Analysis. The commentor's estimate of septic recharges is so noted. Appendix D-2, Hydrogeologial Impacts Study, Table 8 presents groundwater basin model hydrologic budget results used by the County in developing design components of the LOWWP.

Groundwater model results shown in Appendix D-2's Table 9 and 10 include subsurface flow variables that account for vertical and horizontal hydraulic conductivities and basin responses to the proximity of recharge and discharge sources. Compared to the rough estimations provided by the commentor, the results may seem illogical to the commentor, but they account for the dynamics of the changes in the flow system.

The commentor's reference to the Yates and Williams study appears to confuse the statement about the nitrate contribution being proportional to the flow from the 4 identified pathways and instead infers that the flows from the 4 pathways are identical (or of the same proportion).

Additional comments are so noted. Also see Topical Response 3, Water Resources and the Project Scope.

Response to Comment A8-56

This comment expresses a concern that the impacts of Broderson leachfields on seawater intrusion are uncertain. The commentor's reference to the Draft Water Management Plan for mitigation of 560 AFY of seawater intrusion to solve the aquifer overdraft problem is beyond the scope of the LOWWP to mitigate seawater intrusion potential created by the removal of septic system discharges.

See Topical Response 3, Water Resources and Project Scope, and Topical Response 8, The Broderson Leachfield. The Broderson disposal will be proportional to the sewage treated during installation of the collection system and will not contribute to an increased hydrologic budget deficit.

See Topical Response 7, Alternative Disposal Options.

Building the project, that is, collecting and treating wastewater at a central point will provide the community a number of options for further treatment and reuse, which the community can develop in concert with the water purveyors.

See Response to Comment A3-3.

Response to Comment A8-57

This comment expresses a concern regarding performance of the Broderson leachfields. The proposed project represents a cost effective method of disposing of treated wastewater while mitigating the projects impacts on seawater intrusion. See Response to Comment A8-56.

Response to Comment A8-58

This comment states that under the NWRI review, "If Broderson is used, it is important to evaluate regulatory compliance, particularly with regard to CA Department of Public Health groundwater recharge regulations." Because there are no comments on the contents of the Draft EIR, no further response is required. Also see Comment Letter A2 from the California Department of Public Health.

Response to Comment A8-59

This comment expresses a desire for the incorporation of Tertiary Treatment. See Topical Response 3, Water Resources and the Project Scope, regarding water supply and Topical Response 8, The Broderson Leachfield.

Response to Comment A8-60

This comment concerns the County's authority to implement to project. The full paragraph in AB 2701 reads: "(c) The County may undertake any efforts necessary to construct and operate a community wastewater collection and treatment system to meet the wastewater collection and treatment needs within the district. These efforts may include programs and projects for recharging aquifers, preventing saltwater intrusion, and managing groundwater resources to the extent that they are related to the construction and operation of the community wastewater collection and treatment system. These efforts shall include any services that the county deems necessary, including, but not be limited to, any planning, design, engineering, financial analysis, pursuit of grants to mitigate affordability issues, administrative support, project management, and environmental review and compliance services. The county shall not exercise any powers authorized by this section outside the district." The full text of AB2701 can be found on the project website at http://www.slocounty.ca.gov/PW/LOWWP.htm. It should be noted that AB2701 describes the County's authority with respect to the project, whereas the Draft EIR deals with the County responsibility under CEQA to fully mitigate project impacts.

Response to Comment A8-61

This comment expresses the California Department of Public Health, Drinking Water Program, draft regulations for Groundwater Recharge Reuse, dated August 5, 2008. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-62

This comment states that any mixing of sewer effluent with the potable water supply for Los Osos/Baywood Park may contaminate that water supply. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-63

This comment expresses a desire to include a detailed discussion of infiltration and exfiltration. See Topical Response 10, Infiltration, Inflow, and Exfiltration.

Response to Comment A8-64

This comment expresses a concern with regard to the potential impacts of heavy and prolonged storms. See Topical Response 10, Infiltration, Inflow, and Exfiltration.

Response to Comment A8-65

This comment expresses a concern with use of small pipe sealed systems. See Topical Response 10, Infiltration, Inflow, and Exfiltration.

Response to Comment A8-66

This comment expresses a concern that the Draft EIR indicates that groundwater can be put into the open trenches after pipes have been laid, but this mitigation is not likely to handle all the water

encountered and may cause trenches to become unstable. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-67

This comment includes an opinion regarding costs to repair the proposed gravity system if a serious earthquake would occur. Because there are no specific comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-68

This comment expresses a concern with the lack of discussion regarding the cost and specifics of the special maintenance program identified by the Fine Screen Report. It should be noted that the fine screening report also stated that "PVC pipe with bell and spigot joint can perform as new, even after decades of use, indicating that infiltration rates may be near zero." Consequently, the gravity cost estimates do not include a line item for fusion welded pipe, although the cost estimates provide a range which is sufficiently large to include the added expense. The Appendix to the Flows and Loads Technical Memorandum (November 2008) indicates that "the additional installed construction cost for fusion welded PVC piping is estimated to be approximately 12 percent more than bell and spigot PVC piping."

Response to Comment A8-69

This comment expresses a concern with the impacts of global warming on a gravity collection system. Depending on the increase, sea level rise will make the mandated Sewer System Management Plan an even more important on-going element of any project built in Los Osos. For gravity, the extra focus would be on pipes and facilities that are at the edge of the Bay as well as below sea level. For a STEP system, the extra focus would be on the STEP tanks that are also at the edge of the Bay and below sea level, given that the depth of the STEP tanks (8 feet or more) is similar to approximately 75 percent of the gravity collection system. See also Topical Response 10, Infiltration, Inflow, and Exfiltration.

Response to Comment A8-70

This comment expresses a concern regarding the lack of sources or data to support the conclusions associated with the low-pressure system. See Topical Response 5, Alternative Collection Systems.

Response to Comment A8-71

This comment expresses a desire for the inclusion of a combined low-pressure vacuum hybrid system analysis. See Topical Response 5, Alternative Collection Systems.

Response to Comment A8-72

This comment expresses a concern regarding the scope of analysis for collection system alternatives. See Topical Response 5, Alternative Collection Systems.

Response to Comment A8-73

This comment states that the water-tightness of a bell-and-spigot sewer can be preserved if a maintenance program is conducted on an ongoing basis to detect and repair leaks. This program would add to the cost of a gravity sewer compared to a STEP/STEG sewer with similar levels of I/I. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-74

This comment states that in addition to the high installation costs of centralized collection systems (gravity systems), issues with non-watertight joints and damaged sections result in potentially high volumes of inflow and infiltration, or exfiltration in the collection system. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-75

This comment expresses a concern regarding potential environmental impacts on collection system including STEP/STEG and Gravity Hybrid. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-76

This comment expresses a concern regarding pollution to the groundwater basin from exfiltration. See Topical Response 10, Infiltration, Inflow, and Exfiltration.

Response to Comment A8-77

This comment expresses a concern regarding Sanitary Sewer Overflows (SSO) in the even of storms, earthquakes, etc. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-78

This comment expresses a desire for further analysis regarding small-pipe collection systems. See Topical Response 5, Alternative Collection Systems.

Response to Comment A8-79

This comment expresses a desire for further analysis regarding conservation at the Broderson site. The project does not in any way prevent the community from achieving higher water use reductions through the development and implementation of more sophisticated, or more restrictive, mandatory conservation measures. Building the project, that is, collecting and treating wastewater at a central point will also provide the community a number of options for further treatment and reuse, which the community can develop in concert with the water purveyors. However, infiltrating water in the majority of the prohibition zone will not result in greater water supplies being made available to the community as the majority of the water that percolates into the ground in that area does not reach the lower aquifer, or stay in the upper aquifer, but is lost to the Bay. Because of its location, Broderson represents a more efficient method of ensuring that water both reaches the lower aquifer and stays in the upper aquifer.

Response to Comment A8-80

This comment states that it is cheaper and smarter (from a SWI mitigation standpoint) to pursue agricultural reuse now and minimize the need for sprayfields. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-81

This comment expresses a recommendation that the County pursue a nitrate management program. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-82

This comment expresses a concern regarding assumptions associated with the amount of groundwater produced by the Los Osos Basin. The eastern side of the groundwater basin extends to the area just east of the Cemetery and Clark Valley Road (see Exhibit 5.2-1 in Appendix D). Increases in development and the intensity of irrigated agriculture in this are not substantial, especially in relation to the amount of production agriculture that has long existed in the creek valley and the amount of residential development that has existed in the community since 1985.

Response to Comment A8-83

This comment expresses a concern regarding the protection of the aquifer from rising sea levels. Construction of the Broderson disposal site along with the pipeline returning treated effluent to the community will allow the project to provide sufficient water to the upper aquifer, if necessary, that would maintain the existing groundwater "head" that currently prevent seawater intrusion into the portions of the basin that are not being over-pumped. As water purveyors continue to monitor water levels, pumping rates, and threats to the groundwater supply, the project can become an important tool in managing the basin by managing releases at Broderson.

Response to Comment A8-84

This comment expresses a concern regarding the impacts associated with the loss of septic return flow on the basin. See Topical Response 9, Water Conservation Measures

Response to Comment A8-85

This comment expresses a concern regarding groundwater quality mitigation at the Broderson site. Removal and treatment of domestic wastewater at the treatment plant will reduce the present risk of the existing uncontrolled septic discharges and thereby serve to protect the potable water supply of the community.

Response to Comment A8-86

This comment expresses a desire for the project to include tertiary treatment. See Topical Response 4, Tertiary Treatment.

Response to Comment A8-87

This comment expresses a concern regarding the efficacy of the Broderson leachfield to recharge the aquifer and accommodate the planned effluent flows. Topical Response 8, The Broderson

Leachfield, that lists the series of hydrogeological investigations that have been conducted to evaluate the Broderson leachfield and selected the planned effluent disposal rate for the LOWWP. Topical Response 3, Water Resources, and the Project Scope and Topical Response 4, Tertiary Treatment, which address the water resources and seawater intrusion issues raised by this comment.

Response to Comment A8-88

The comment expresses concern about water supply that imported water and desalination are not options for Los Osos water supply. This particular subject is not within the purview of this Draft EIR. Carollo Engineers Technical Memorandum "Imported Water" provides a discussion of this topic for the information of readers but is not identified as a primary objective of the LOWWP.

Response to Comment A8-89

This comment expresses the opinion that effluent from the wastewater treatment process not be squandered and should be used for Agricultural Reuse. See Topical Response 3, Water Resources and Project Scope, and Topical Response 4, Tertiary Treatment, for a discussion about the scope of the LOWWP regarding uses of effluent disposal.

Response to Comment A8-90

The comment suggests the Draft EIR analyze impacts of various levels of water conservation measures and LID measures negating the need for Broderson leachfield operations. Environmental analysis of water conservation measures and LID measures are not within the scope of this Draft EIR since they relate to water supply and water resource issues. See Topical Response 3, Water Resources and the Project Scope; Topical Response 7, Alternative Disposal Options; and Topical Response 8, The Broderson Leachfield. The two means of effluent disposal identified for the project are sprayfield operation (at Tonini) and leaching at Broderson. Use of the sprayfields at Tonini is the normal operation with some use of Broderson to provide flow to the aquifers (to facilitate water migration to aid in preventing further saltwater intrusion). However, in times of inclement weather Broderson leachfield operation is required for effluent disposal since the sprayfields cannot be used effectively. Thus, elimination of Broderson is not feasible in addressing the needs for effluent disposal. It should be noted that enhancement of LID measures for water supply benefits are encouraged and should be pursued by the appropriate water purveyor

Response to Comment A8-91

This comment states that it is cheaper (both capital costs and annual O&M) and smarter (from a SWI mitigation standpoint) to pursue agricultural reuse now and minimize the need for sprayfields. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-92

This comment concerns alternative collections systems such as a low pressure and/or vacuum system. The initial in depth comparison of gravity, STEP/STEG, low pressure and vacuum collection systems was completed for the Rough Screening Report (Carollo 2007b). The Draft EIR provides a comparison of low pressure and vacuum collection systems with gravity and STEP/STEG collection

systems in Section 7.3.2 Raw Wastewater Collection System. Additional information is provided in Appendix B: Project Description Data; Appendix P-1: Alternative Components; Appendix P-2: Evaluation of Component Alternatives, Section 3.4; and in the Fine Screening Report, Section 3.1.1. The results of an extensive study evaluating a low pressure collection system option are summarized in the Low Pressure Collection System Technical Memorandum (January 2008). One of the primary disadvantages of a low pressure collection system is that in the event of a power failure, grinder pumps do not operate since they are not generally supplied with backup power. This issue will be added to Table 7-5 on page 7-23 of the Draft EIR. Also see Topical Response 5, Alternative Collection Systems.

Table 7-5: Screening of Collection System Alternatives

Baseline Criteria	Gravity1	Combined Septic Tank Effluent Pumping (STEP)/ Septic Tank Effluent Gravity (STEG) System	Low Pressure Collection System (LPCS)1	Vacuum System
Level Designation	**Level A**	**Level A**	**Level C**	**Level C**
Groundwater Quality & RWQCB Waste Discharge Requirements	• Meets RWQCB requirements for elimination of pollution to groundwater • Least ex-filtration • Septic tank effluent that currently recharges aquifer is removed	• Meets RWQCB requirements for elimination of pollution to groundwater • Some exfiltration with pressurized pipelines. • Septic tank effluent that currently recharges aquifer is removed	• Meets RWQCB requirements for elimination of pollution to groundwater • Less exfiltration than STEP; more than gravity system. • Septic tank effluent that currently recharges aquifer is removed	• Meets RWQCB requirements for elimination of pollution to groundwater
Water Resources	• Inflow - As gravity system ages, Inflow can occur at lateral connections, manholes, and mainline joints. Regular maintenance can reduce • Infiltration - Potential where mainlines and manholes are below water table. • Septic tank effluent that currently recharges aquifer is removed.	• Inflow - As STEP/STEG system ages, Inflow can occur at house lateral connections and STEP/STEG tank joints. • Infiltration - Unlikely. • Septic tank effluent that currently recharges aquifer is removed	• Inflow - As LPCS system ages, Inflow can occur at house lateral connections and grinder pump station connections. • Infiltration - Unlikely. • Septic tank effluent that currently recharges aquifer is removed • <u>During power outage, spills can occur because grinder pumps do not have capacity to provide wastewater storage</u>.	Not evaluated.

Response to Comment A8-93

This comment expresses a recommendation that the County pursue a basin management plan which includes a nitrate management plan. It should be noted that the County, in conjunction with the community's water purveyors, is already pursuing a Basin Management Plan. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-94

This comment expresses a desire for the inclusion of a basin management plan. See Response to Comment A8-93.

Response to Comment A8-95

This comment expresses a desire for the inclusion of storm water as a resource. The proposed project includes the development of infrastructure for a wastewater collection, treatment and disposal system. Because the comment is outside the scope of the Draft EIR, no further response is required.

Response to Comment A8-96

This comment expresses a desire for a threshold of significance analysis for Broderson. It is unclear exactly what the commentor intends. Regarding Broderson, the Draft EIR includes thresholds of significance for every impact area that relates to the Broderson site, including water supply, water quality, biological impacts etc.

Response to Comment A8-97

This comment expresses support for the inclusion of additional conservation efforts. See Response to Comment A8-95 regarding the inclusion of storm water as a resource.

Response to Comment A8-98

This comment expresses a concern regarding the lack of discussion for the threshold of significance at the Broderson site. See Response to comment A8-96. Potential drainage and surface water impacts associated with the Broderson site are fully analyzed in Appendix E (see page 5.3-29 and following in Appendix E).

Response to Comment A8-99

This comment expresses a concern regarding the impacts on the groundwater basin as a result of constructing a community drainage system, including curbs, gutters, pavement, and storm drains. This general comment does not provide specific critique of the proposed project since the proposed project will replace existing drainage systems in-kind and does not propose the development of new curbs, gutters, pavement or storm drains.

Response to Comment A8-100

This comment requested that the project include methods of controlling and utilizing drainage and runoff. Also see Response to Comment A8-95 regarding the use of stormwater as a resource. As for controlling stormwater runoff, the proposed project includes various features to control runoff to reduce potential erosion and degradation of water quality. Under the Preferred Project (see Appendix

Q-3), surface water flow upgradient of the proposed treatment plant will be collected by a drain that will convey stormwater around the perimeter of the wastewater treatment plant facilities and eventually convey the stormwater to an onsite creek subsequent to entering a energy dissipater. Stormwater that falls within the area of the treatment plant facilities will be collected and conveyed to a retention basin within the perimeter of the proposed treatment plant facilities.

Response to Comment A8-101

This comment expresses a desire for threshold of significance analysis for Broderson. See Response to Comment A8-96.

Response to Comment A8-102

This comment expresses a concern regarding general description of groundwater conditions. The Draft EIR developed its groundwater impacts analysis using detailed groundwater basin studies listed in the References section of Appendix D-2. These studies address the types of conditions observed by the commentor throughout the stabilized dune sands area of Los Osos.

Since the time of the commentor's work around town in 1983, substantial site specific hydrogeological and geotechnical studies have been conducted at the Broderson disposal site. The geology of the site is substantially documented and the infiltration rates and subsurface movement of percolating water is tested at the site.

The commentor's observations are noted.

See Topical Response 8, The Broderson Leachfield.

Response to Comment A8-103

This comment reiterates that the project could expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving a strong seismic ground shaking. Because there are no specific comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-104

This comment asked if a geotechnical report could conclude that the potential impacts from liquefaction would be reduced with feasible measures to less than significant. Mitigation Measure 5.4-C1 states that a geotechnical report is required that addresses liquefaction hazards. In addition, the types of mitigations and studies that need to be considered in the project planning are discussed in sufficient detail in the geotechnical reports that have been prepared for the various components of the project so that the County can provide adequate contingencies to implement the measures.

Response to Comment A8-105

This comment states that it is also clear from numerous studies that large gravity collection system pipes are the most susceptible to settlement from liquefaction and/or rupture resulting in loss of service ability.

Draft EIR Section 5.4, Geology, and Appendix F, Geology, contain a full analysis of the projects potential impacts on liquefaction and seismic concerns, and conclude that no significant impacts would result.

Response to Comment A8-106

This comment expresses a desire for a new geology study to characterize the underground water system at the Broderson site. See Topical Response 8, The Broderson Leachfield.

Response to Comment A8-107

This comment expresses a concern regarding the risk of lateral movements of discharge at the Broderson site. Sand and water flowing off the hillsides above Los Osos in 1979 and the mid-1980s was the result of rain falling on the slopes above residential development. Undoubtedly, much of the flows were due to erosion of areas denuded of natural vegetation on trails and roads crossing the area. The Broderson leachfield will be entirely underground; therefore, the effluent disposed of at the site will not contribute to surface runoff. Areas impacted by construction of the leachfield will be re-vegetated and protected against erosion through the use of erosion control measures common to the construction industry and mandated by the Statewide Construction Stormwater Permit (see Response to Comment A3-7). Draft EIR Section 5.4, Geology, and Appendix F, Geology, of the Draft EIR contain a full analysis of the projects potential impacts on liquefaction and seismic concerns, and conclude that no significant impacts would result. Regarding damage to utility systems from seismic events in California over the years, it should be noted that many existing systems were designed and constructed before the effects of seismic events were considered in these systems. Current design techniques using modern materials should serve to substantially lessen the impact of seismic events on these systems.

Response to Comment A8-108

This comment expresses a concern regarding the designation of Less Than Significant or No Impact related to the project being susceptible to fault rupture or landslide, recommending that an analysis of the lamellae lenses would be necessary. The threshold of significance is related to fault ruptures which are analyzed in Appendix F-1, Expanded Geology Analysis. There are no active faults within the project site. Review of this section should eliminate the concerns expresses with regard to the designation of Less Than Significant or No Impact.

Response to Comment A8-109

This comment postulates a series of geologic events which are not likely to occur. Draft EIR Section 5.4, Geology, and Appendix F, Geology, contains a full analysis of the projects potential impacts on liquefaction and seismic concerns and concludes that these types of effects will not occur to a substantial level.

Response to Comment A8-110

This comment expresses a desire for a new geology study to characterize the underground water system at the Broderson site. See response to comment A8-102 and Topical Response 8, The Broderson Leachfield.

Response to Comment A8-111

This comment expresses a concern regarding the validity of the geotechnical report. See Response to Comment A8-104 regarding mitigation measures for potential liquefaction impacts.

Response to Comment A8-112

This comment stated that ground lurching was identified in the Draft EIR as a significant impact and asked that detailed mitigation measures be provided at this time as well as the cost of the measures. Furthermore, the comment asked who would be responsible to repair damage of the proposed facilities in the event of an earthquake. The comment correctly states that ground lurching was identified as a potential significant impact in the Draft EIR. Mitigation Measure 5.4-F1 identifies the specific measures to reduce the potential for ground lurching as well as lateral spreading and ground subsidence would be included in a geotechnical report prior to approval of the improvement plans. The types of mitigations and studies that need to be considered in the project planning are discussed in sufficient detail in the geotechnical reports that have been prepared for the various components of the project that the County can provide adequate contingencies to implement the measures.

Response to Comment A8-113

This comment expresses a concern regarding the provision of services in event of liquefaction if a gravity system is used. See Response to Comment A8-109.

Response to Comment A8-114

This comment asked if the operation of Broderson leachfield would result in a risk of disposed water moving laterally to pollute the bay. As stated in Section 5.2.5 on page 5.2-19 in Appendix D-1, the 2003 Los Osos Community Services District (LOCSD) modeling results indicated that Broderson disposal will provide beneficial impacts that restore groundwater recharge and maintain a balance in the hydrologic budget that provides outflows for local well production and freshwater features such as marshes and springs around the bay. However, as also stated in Section 5.2.5 on page 5.2-28 in Appendix D-1, the potential impacts of effluent disposal at Broderson on the underlying groundwater quality was assessed by the LOCSD who performed the water quality modeling study in 2003. The study concluded that while change would be gradual over time, the removal of septic system recharge in the prohibition area and the return of treated effluent with a reduced nitrate concentration to the Broderson site would result in a beneficial impact that would improve water quality.

Also see Topical Response 8, The Broderson Leachfield, regarding treated wastewater discharged at Broderson and the filtering process while migrating down slope toward the Bay.

Response to Comment A8-115

This comment states that the mitigation plan must be available to be evaluated. CEQA requires the Mitigation Monitoring Plan to be adopted at the time the EIR is certified, not during review of the Draft EIR. All project mitigation measures are contained in the EIR. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-116

This comment expresses a concern regarding the provision of services in the course of a seismic event. The proposed project includes the development of infrastructure for a wastewater collection, treatment and disposal system. Because the comment is outside the scope of the Draft EIR, no further response is required.

Response to Comment A8-117

This comment is concerned with the loss of groundwater recharge from the existing septic system on the wetlands and wetlands habitat in the community. See Response to Comment A8-9.

Response to Comment A8-118

This comment expresses a desire for further clarification and source data regarding the difference between the STEP/STEG and gravity collection system. Table 5.6-2 provides information on known sites within the collection system, not on the potential for sites. Work conducted by Far Western during the previous project identified areas where cultural resources are present or areas where there is a high potential for buried archaeological resources. According to the testing and probes they conducted, no areas, other than those identified in Table 5.6-2 are present.

The differences between directional bored pipe and excavation of trench for the gravity system are negligible. Most prehistoric archaeological sites in the previous work were found in the upper 4 feet of excavation and the impacts would occur under either the pressurized system or the gravity system. Any previously undiscovered archaeological materials found under either scenario could be avoided or impacts reduced. The difficultly with the STEP tanks in front yards is an unavoidable impact, since the tanks must be placed in front yards. Previous studies conducted by Far Western did not address the issues of archaeological remains associated with excavations of the STEP tanks. Excavations for the STEP tanks would be substantial with excavations of 10 feet by 18 feet up to an average of 16 feet by 24 feet with an average depth of 8 feet, leaving little flexibility to avoid resources. This was taken into consideration when assessing impacts of the various collection systems.

Response to Comment A8-119

This comment expresses a concern regarding the possible historical significance of the Tonini site. The Tonini Ranch complex is evaluated for inclusion to both the National Register of Historic Places and the California Register. None of the existing structures can definitively be dated to the original Tonini dairy complex. Several of the existing buildings date to a later period of Michael Tonini's occupation, particularly to 1908-1916 when he demolished his original home and built the Queen

Anne style family residence on the property. The two major barns appear to be early twentieth century transverse crib barns with Queen Post trusses joined by wire nails. The barns have compromised integrity through shed additions, poured concrete perimeter foundations, corrugated metal roofing, and alterations to window and door openings. (Appendix H-3 Historical Resources Inventory and Evaluation Report Page 26)

Furthermore, this complex is evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and does not meet the significance criteria as outlined in these guidelines. (Appendix H-3 Historical Resources Inventory and Evaluation Report page 28).

Response to Comment A8-120

This comment states that as technology in detecting, identifying and treating for emerging contaminants continues to advance, indicating that regulations will become increasingly stricter in both contaminant and allowable levels. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-121

This comment states that there is a discussion posing future reuse/recharge in ag exchange yet the Draft EIR contains no discussion about treatment and infrastructure requirements. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-122

The comment states that the Draft EIR contemplates only secondary treatment of effluent. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-123

This comment stated that there was no discussion of groundwater contamination from raw wastewater. Impact 5.7-C in Section 5.7 in the Draft EIR and in Appendix I-1 provides a discussion of accidental conditions including release of raw wastewater within streets or at creek crossings. Mitigation Measure 5.7-B1 includes a discussion of procedures to respond to an accidental spill and these procedures would also include spills affected groundwater.

This comment also is concern with landslides down gradient from Broderson. See Response to Comment A8-25, regarding liquefaction and landslide potential at Broderson.

Response to Comment A8-124

This comment expresses a concern regarding public safety associated with heavy equipment, deep trench excavation and potential flooding. Construction areas will be cordoned off from the public, thereby reducing direct impacts associated with cave-ins during construction. See Topical Response 13, Construction Excavation, regarding shoring.

Response to Comment A8-125

This comment concerns preventive measures to avoid overflows, spills or leakage of raw wastewater. Topical Response 12, Sewer System Management Plan (SMMP), that the LOWWP is required to prepare by California SWRCB regulations. The SSMP covers the operations, preventative maintenance, and emergency response planning and preparation that will be required to minimize the likelihood that overflows, spills, or leakage occur.

Response to Comment A8-126

This comment requested that the health impacts associated with air quality should also be crossed referenced with public health and safety impacts. Draft EIR Section 5.9, Air Quality, and Appendix K-1 include a discussion of air quality impacts and the level of impact compared to the thresholds. Health risk impacts (i.e., diesel exhaust) are measured over a long time period such as 70 years. Therefore, extrapolating health risks associated with construction activities that would occur over a two-year period are speculative. As stated on Draft EIR page 5.9-8, the project would not emit a significant amount of toxic or hazardous air pollutants and would not release a significant amount of diesel emissions during its operation.

Response to Comment A8-127

This comment expresses the need for the Draft EIR to identify alternatives to methanol. Methanol is the most common chemical used to provide a carbon source for wastewater treatment systems that need to achieve both low nitrogen limits and have initial low levels of carbon in the influent. Alternatives were researched although limited information regarding carbon footprints is available. In many cases alternatives are used because they are readily available (such as the use of molasses in sugar producing areas). Methanol produces a carbon footprint in two ways; first from the production of the chemical (which as greenhouse gas regulations tighten should be reduced) and through the transportation of the chemical (on-road fuel uses). While we expect the greenhouse gas footprint of chemical transportation to reduce over time, any other alternative to methanol will require a greater volume of material to be used (as methanol has the highest carbon component), thus increasing the carbon footprint. In the comparison of alternatives, methanol is one component of a projects carbon footprint (see section 5.9 and Appendix K of the Draft EIR). Regarding potential future greenhouse gas regulations, two of the three alternatives (2 and 3) have carbon footprints generated primarily from energy usage. If necessary, switching to alternative "green" energy is a real possibility. Two other alternatives (1 and 4) would present more difficult challenges if additional greenhouse gas regulations were forthcoming could be accomplished. We have yet to identify a cost effective method to address methane generated from STEP tanks (alternative 1); providing a low footprint carbon source for pond systems (alternative 4) is less problematic but remains an issue.

Response to Comment A8-128

This comment asked about emergency response to residents in construction zone. As identified in Mitigation Measure 5.8-A.1 on page 5.8-11 in the Draft EIR, a traffic management plan shall be implemented during construction activities. This plan will accommodate emergency access.

Response to Comment A8-129

This comment is concerned with safety measures for pedestrian traffic on unlit streets at night. As required for all construction contractors associated with utility installations, construction areas are required to be adequately designated for no entry or provide temporary measures (i.e., metal plates to cover open trenches) to allow access through the work area. As part of the Traffic Management Plan and as outlined in Mitigation Measure 5.8-A1, the public would be notified of proposed construction activities prior to beginning the construction activities and periodically during the course of project construction.

Response to Comment A8-130

This comment expresses the concern that diesel-related air quality issues are not cross-referenced in Draft EIR Appendix I. The Draft EIR fully and adequately discusses health effects from diesel emissions from construction equipment and on-road diesels. Impacts from construction equipment and on-road activity was analyzed and mitigated in Draft EIR Appendix K and in Section 5.9, Air Quality. Even though there may be some crossover to Appendix I, Public Health and Safety, these effects were appropriately analyzed and mitigated within the air quality analysis.

Response to Comment A8-131

This comment expresses a concern regarding trench wall security and public safety. See Topical Response 13, Construction Excavation, regarding trench wall security and public safety and Response to Comment A8-129.

Response to Comment A8-132

This comment expresses a concern over the advantage of utilizing larger pipe rather than sealed, flexible small pipe. Overall, the proposed pipelines and ancillary facilities proposed for Los Osos are significantly smaller in size and quantity compared to the densely developed large urban areas affected by the Northridge earthquake. Sewer pipelines for both the STEP/STEG collection system and the gravity collection would largely be constructed with "plastic" materials, such as polyvinyl chloride (PVC) or high-density polyethylene (HDPE) pipe. A higher proportion of the STEP/STEG collection system would be force mains while only a limited portion of the gravity collection system would be force mains as shown in Appendix Q's Exhibit Q.3-1. Sewer pipeline diameters range from 4 to 10 inches for the STEP/STEG collection system piping with a bury depth of 4 to 6 feet. Gravity system pipelines range from 8 to 18 inches in diameter; however, only about 2.6 percent of the gravity system pipelines would be 15 to 18 inches in diameter. Average depth for the gravity pipelines is 8 feet, and less than 3 percent of the gravity collection pipelines would be installed at depths ranging from 13 to 18 feet. Both the STEP/STEG and gravity collection systems connect to a 14-inch pressurized conveyance pipeline to the WWTP.

The County is required by the Regional Water Quality Control Board regulations to prepare a Sewer System Management Plan (SSMP) that will cover regular and emergency response maintenance. Emergency response planning will include storing sufficient replacement pipe in appropriate sizes at LOWWP facilities and having emergency response plans to quickly mobilize LOWWP staff and

contractors as well as equipment to replace sewer collection facilities damaged by a seismic event or other emergencies. To respond to unusually large events, the County will have cooperative on call agreements with other nearby sanitary agencies and contractors to provide additional construction materials and response teams.

The quantity of wastewater likely to be spilled is similar for both the STEP/STEG and gravity collection systems during an earthquake since the same quantity of wastewater would be flowing in the two types of collection systems, regardless of the pipeline size. The raw wastewater solids concentrations will be less in the STEP/STEG system; however, the higher pressures could increase the spill size.

Response to Comment A8-133

This comment expresses a concern regarding future water regulations changes. A key component of the County's approach to the treatment plant is to ensure that the system that is chosen can be easily modified, or added to, to meet potential future requirements, whether they be related to reuse of the effluent or to higher treatment levels. We are aware that issues such as tritium and pharmaceuticals are being reviewed by appropriate regulatory agencies at the Federal and State level. If additional treatment is required, it can be added to the treatment train without the need to abandon any of the existing treatment steps that will already be in place. By constructing a treatment plant that can be easily upgraded, Los Osos should be in a position to meet future treatment levels in a very cost effective manner. The costs of higher treatment levels have traditionally been subsidized by various funding programs, however the issue of the cost to citizens of ever more stringent regulations is a national issue with no clear resolution at this time.

Response to Comment A8-134

This comment expresses a concern regarding prevention protocols for raw sewage at manholes and pump stations. See Topical Response 12, Sewer System Management Plan.

Response to Comment A8-135

This comment expresses a concern regarding landslides. Draft EIR Section 5.4 and Appendix F contain a full analysis of the potential impacts of landslides on the project; no significant landslide risks were identified.

Response to Comment A8-136

This comment expresses a concern regarding alternatives to methanol. See Response to Comment A8-127.

Response to Comment A8-137

This comment asked about emergency response to residents in construction zone. See Response to Comment A8-128.

Response to Comment A8-138

This comment is concerned with safety measures for pedestrian traffic on unlit streets at night. Also see Response to Comment A8-129.

Response to Comment A8-139

This comment expresses a concern regarding endocrine disruptors. It is not possible to accurately predict the future regulatory climate for wastewater. See also Response the Comment A8-133.

Response to Comment A8-140

This comment expresses a concern regarding use of notifications, as identified in the Traffic Management Plan. Residents are typically notified through multiple methods. Common approaches include posting written notices at each residence, providing contact numbers for questions, and maintaining a detailed construction program website.

Response to Comment A8-141

This comment concerns the traffic impacts of employee commuting. The assumptions for daily employee trips and mileage are defined in the air quality calculations tables. An updated version of the air quality calculations relating to traffic impacts are discussed for the Preferred Project in Appendix Q5.9.

Response to Comment A8-142

This comment concerns the construction staging areas and parking for construction employees. There are two construction staging areas as described in the Preferred Project description in Appendix Q and depicted on Exhibit Q.3-1 therein. One staging area will be at the location of the East Paso pump station. The second will be at the Tonini site near the wastewater treatment facility treatment plant access road intersection with Turri Road. Parking for the estimated 111 construction employees will require about 0.75 acres and will be split between the two staging areas.

Response to Comment A8-143

This comment asked why Proposed Project 1 assumes that the central collection point is at the Mid-town site. The County determined that the proposed projects as well as the Preferred Project as described in Appendix Q would utilize the pipeline collection system design that is already available from the previous 2001 Wastewater Treatment Facilities project so that additional costs associated with redesigning the central collection point would not need to be incurred. If Proposed Project 1 moves forward (the Preferred Project includes a gravity system), there are alternative sites that have been identified for a central collection point for a STEP/STEG system. At this time, given the current Preferred Project, it would not be prudent for the County to incur additional expenses to redesign the collection system for an alternative central collection point.

Response to Comment A8-144

This comment asks if the conclusion that Proposed Project 1 would contribute to potential impacts was substantiated by an outside source who is an expert in the construction of STEP collection

systems. The conclusions presented in the Draft EIR were substantiated and supported by engineers licensed by the State of California to provide such evaluations.

Response to Comment A8-145

The comment expresses a concern about a septage receiving station located at the treatment site and whether or not such a facility is cost effective for the project. Reference is made to the Carollo Technical Memorandum on Regional Septage Receiving. The comment asserts that costs for the station would not support its construction when compared to the Santa Maria location. The context of the recommendation in the Carollo Technical Memorandum that a septage receiving facility is not cost effective is under the context of a regional facility (one that would receive septage from all of San Luis Obispo County). The comment is true when referring to a regional facility. However, the Carollo Technical Memorandum also states that a septage receiving facility that serves only the Los Osos septage needs is feasible and does not constitute an issue with regard to treatment facility design or operation. This point is missed by the commentor. See also Response to Comment A8-34.

Response to Comment A8-146

This comment concerns the construction and operations air quality impacts of Proposed Project 4 in comparison to Proposed Projects 1 through 3 as well as why Proposed Project 4 was selected as the Preferred Project. The commentor is correct to state that Proposed Project 4 has higher construction phase air quality impact than Proposed Projects 1 through 3 primarily because of the longer conveyance pipeline distance to construct to the Tonini site. Section 5.9.6 contains mitigation measures to reduce the potential impacts below the threshold of significance.

Table 5.8-14: Proposed Project 4 Operational Emissions is corrected below. With these corrected emissions estimates, Proposed Project 4 has lower emissions than Proposed Projects 1 through 3 for the operations phase. The overall operations level of significance is still below the threshold of significance for all four proposed projects. The Preferred Project described in Appendix Q combines an oxidation ditch with a gravity sewer collection system. This alternative will have even lower operational emissions than Proposed Project 4. For this reason among others, the Preferred Project Alternative is designated the Environmentally Superior Alternative.

Table 5.9-14: Proposed Project 4 Operational Emissions

System	Pounds Per Day			
	ROG	CO	NO_X	PM_{10}
Collection	0.03	1.24	0.28	0.02
Conveyance	0.01	0.39	0.05	0.00
Treatment	~~1.33~~0.74	~~3.51~~1.97	~~14.13~~7.90	~~0.49~~0.27
Disposal	0.00	0.00	0.00	0.00
TOTAL	**~~1.38~~0.78**	**~~5.14~~3.60**	**~~14.46~~8.23**	**~~0.51~~0.29**
Current Operations	0.12	1.15	5.54	0.15

System	Pounds Per Day			
	ROG	CO	NO_X	PM_{10}
NET DIFFERENCE	~~1.26~~0.66	~~3.99~~2.46	~~8.92~~2.69	~~0.36~~0.14
District Threshold	10	550	10	10
Exceeds Threshold	No	No	No	No
Source: MBA 2008.				

Response to Comment A8-147

This comment states that in light of the Severity Level III of the Los Osos Groundwater Basin, LOCAC urges the County to avoid impacts, rather than mitigation for them, and to reduce the need for watering/dewatering whenever possible. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-148

This comment recommends use of Low Impact Development (LID) strategies when restoration of vegetation and soil stabilization done for the project. We concur with this comment and they will be incorporated into the Design-Build specifications for project implementation. See Response to Comment A4-11.

Response to Comment A8-149

This comment recommends that contact information for the air quality monitor be available. The Draft EIR contains a mitigation that requires this availability of information. Mitigation Measure 5.9-C4(m) states that "the name and telephone number of such persons will be provided to the SLOAPCD prior to the start of construction."

Response to Comment A8-150

This comment states that assumptions and repercussions for air quality (particularly for greenhouse gases) should be more fully explained and scrutinized. The Draft EIR conducted a thorough and adequate analysis of greenhouse gases and other air quality concerns in Section 5.9 and Appendix K.

Response to Comment A8-151

This comment expresses the concern that the Draft EIR finds that all projects have the same impacts. In fact, the air quality analysis in the Draft EIR shows that all four projects have different level of impacts with regards to air quality. The commentor seems to be referring to Table 5.9-3, which refers to general categories of significance and the analysis shows that levels of significance of each project are in similar general categories.

Response to Comment A8-152

This comment expresses a concern regarding the selection of the Mid-town site. See the Response to Comment A8-42.

Response to Comment A8-153

This comment expresses a concern regarding the conclusions associated with the emission impacts generated by Proposed Project 1. See Response to Comment A8-144.

Response to Comment A8-154.

This comment asks why were differences in construction times for STEP versus gravity not discussed in the Draft EIR. The Draft EIR uses detailed construction time information in the calculations for criteria and GHG emissions. Information on days of operation for each phase and sub-phase of construction are presented in Appendix K-2.

Response to Comment A8-155

This comment expresses a concern regarding the economic feasibility of building a septage receiving station at the LOWWP. See the Response to Comment A8-34.

Response to Comment A8-156

This comment expresses a concern about conclusions reached in the Draft EIR regarding the "Environmentally Superior" project with respect to Air Quality issues (comparing Tables 5.9-5 and 5.9-9). The selection of the "Environmentally Superior" project included many factors as discussed in Section 7.4. Greenhouse gasses (GHG) are only one of many elements considered in the total sum of environmental impacts considered for the "Environmentally Superior" project (major factors included ESHA concerns, additional impacts to agricultural lands, cultural and biological impacts at the other sites.) The reader should refer to the revised detailed Appendix K-2 related to Air Quality/Greenhouse Gas matters and the revised tables for GHG listed on pages GHG 1- 9. GHG is only one small part of the evaluation. The overall GHG emission increase is minor for Proposed Project 4. It is anticipated that the future for the region with the project implemented will most likely show decreases in GHG while if the existing conditions were to continue, there would be an increase in GHG and probably get worse because any improvements related to on-road septage removal would be overshadowed by aging conditions on septic tanks.

Response to Comment A8-157

This comment states that in light of the Severity Level III of the Los Osos Groundwater Basin, LOCAC urges the County to avoid impacts, rather than mitigation for them, and to reduce the need for watering/dewatering whenever possible. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-158

This comment recommends the inclusion of LID strategies. See Response to Comment A8-99 regarding the strategies that will be employed during road restoration after the installation of the collection system. See also Topical Response 11, Construction and Post-Construction Stormwater.

Response to Comment A8-159

This comment expresses concern that an analysis of alternative energy sources and their potential to generate revenue was not addressed in the Draft EIR. Section 5.9, Air Quality and Appendix K-1 of the Draft EIR as well as the AB 32 - Greenhouse Gas Emissions Inventory Technical Memorandum prepared by Carollo Engineers in May 2008 addressed emissions from energy sources associated with various project components. These emissions were evaluated and compared to determine which project components would generate the greatest greenhouse gas emissions. An analysis of energy sources to determine the potential to generate revenue is not required by the CEQA Guidelines.

Response to Comment A8-160

This comment recommends that the point of contact for the air quality monitors would be available to the LOCSD. Air quality Mitigation Measure 5.9-C4 (m) requires an air quality monitor reporting to the Air Pollution Control District. This is appropriate because the LOCSD has no permit or other statutory authority over the project.

Response to Comment A8-161

This comment asked what the significant noise impacts are of pile driving and how would the residents be notified. Section 5.10 in the Draft EIR and Appendix L-1 address the potential noise impacts from pile driving. Mitigation Measure 5.10-C2 is provided to reduce the potential noise impact from pile driving to less than significant. Notification to the public for all aspects of construction is provided through multiple means, including but not limited to; public service announcements, website updates, door hangers, and site specific signage.

Response to Comment A8-162

This comment expressed a concern for pile driving operations and the responsibility for noise and vibration impacts. This comment also states that the anticipated vibration from the pile driving is likely to cause physical damage to existing structures. Mitigation Measure 5.10-B1 is recommended to reduce potential vibration impacts to less than significant. In addition to this measure, Mitigation Measure 5.10-C2 requires the construction contractor to use a noise damper between the pile driver and the object being driven into the ground. Implementation of this measure will also reduce vibration impacts.

Response to Comment A8-163

The comment is concerned about vibration or noise levels that might affect the natural environment. Mitigation measures have been developed to reduce impacts to nesting bird species. The Mitigation Measures 5.5-A11 and 5.5-A12 have been slightly modified to address more specifically construction-related issues.

Noise and vibration-related impacts to birds would be covered under the following two mitigation measures:

5.5-A11	If ~~the removal or trimming of any trees or shrubs~~ construction is proposed during the general bird breeding season (February 1 through August 31), a pre-construction survey shall be conducted by a qualified biologist within 10 calendar days prior to grading activities within any project impact area to identify all active nests in areas impacted throughout project construction and implementation. If an active nest is identified during the pre-construction survey, no construction activity shall take place within a minimum of 250 feet of any active nest until the young have fledged (as determined by a qualified biologist) and/or the nest is no longer determined to be active. Construction activity in the vicinity of any active nest shall be conducted at the discretion of a qualified monitoring biologist. For sensitive species, including Allen's hummingbird, yellow warbler, and loggerhead shrike, the distance and placement of the construction avoidance shall be a minimum of 250 feet unless otherwise determined through consultation with the CDFG.
5.5-A12	If ~~the removal or trimming of any trees or shrubs~~ construction is proposed during the general raptor breeding season (April 1 through July 31), a pre-construction survey shall be conducted by a qualified biologist within 10 calendar days prior to grading activities within any project impact area to identify all active raptor nests in areas impacted throughout project construction and implementation. If an active raptor nest is identified during the pre-construction survey, no construction activity shall take place within a minimum of 500 feet of any active raptor nest until the young have fledged (as determined by a qualified biologist) and/or the nest is no longer determined to be active. Construction activity in the vicinity of any active nest shall be conducted at the discretion of a qualified monitoring biologist. Pursuant to Section 2050 of the CFG Code, the CDFG will not permit any impacts to the California state fully protected raptor white-tailed kite. If an active nest or breeding territory is detected during preconstruction surveys for nesting birds, no construction activities shall take place within 500 feet of the location of the active nest. The area shall be completely avoided and fenced to allow for an adequate buffer from construction activities. A qualified biologist shall be retained to monitor the activity of the nest during the breeding season until it is determined that the nest is no longer active (i.e. all young have fledged the nest and are no individual kites are dependent on the nest).

Response to Comment A8-164

This comment asked if the neighborhood would be notified of truck traffic and construction noise. Similar to other utility improvement within the County of San Luis Obispo, residents will be notified when construction activities will occur in the residential areas.

Response to Comment A8-165

This comment expresses a concern with the lack of discussion regarding the acoustic setting. The Expanded Noise Analysis in Appendix L-1 of the Draft EIR provides noise measurements along roadways to convey the level of noise along roadways within the community. No specific comments on the impact analysis are provided. No further response is necessary.

Response to Comment A8-166

This comment asked where the vibration threshold was obtained. The Draft EIR analyzed vibration based on both peak particle velocity (PPV) and the root mean square velocity expressed in decibels (VdB). The vibration propagation was based on the screening procedures provided in the Transit Noise and Vibration Impact Assessment, prepared by the Federal Transit Administration (FTA), May 2006.

This comment also states that the anticipated vibration from the pile driving is likely to cause cracks in buildings and cause excessive noise that would be in excess of County noise standards. Mitigation Measure 5.10-B1 is recommended to reduce potential vibration impacts to less than significant. Mitigation Measures 5.10-C1 and 5.10-C2 are recommended to reduce potential construction noise activities to less than significant. There are no County applicable noise standards for construction activities. The County has established time frames that allow construction activities to occur.

Further, this comment stated that potential vibration and noise impacts to the natural environment is a concern. Section 5.5 in the Draft EIR addresses potential impacts of the proposed project on wildlife species and includes mitigation measures such as Mitigation Measures 5.5-A11 and 5.5-A12 related to nesting birds. Potential impacts to sensitive wildlife are also addressed in Section 5.5 in the Draft EIR and mitigation measures are provided in Table 5.5-2.

Response to Comment A8-167

This comment identifies the need to avoid pile driving or identify an alternative to pile driving to reduce potential vibration impacts. As identified in the comment, Mitigation Measure 5.10-B1 requires notification of the property owners as well as requiring the construction contractor to document characteristics of the structures as well as be responsible to remediate potential damages. In addition to this measure, Mitigation Measure 5.10-C2 requires the construction contractor to use a noise damper between the pile driver and the object being driven into the ground. Implementation of this measure will also reduce vibration impacts.

The comment recommended avoiding pile driving, but pile driving would likely be required where the groundwater level is above the level of the excavation depth for the pump stations. The pile

driving would consist of either driving steel sheets into the ground to slow down the water running into the excavation area or to drive concrete caissons into the ground, where a precast pump station would then be placed on top of the driven caissons. The comment sites the seven alternatives to pile driving that can reduce vibration and noise. These include the following:

1. Jetting: Jetting occurs when a mixture of air and water is pumped through high-pressure nozzles to erode the soil adjacent to the pile and is recommended for hard layers of soil that would generate high levels of vibration. Jetting using a mixture of air and water from the excavation may be an acceptable alternative to pile driving, or may be used in conjunction with pile driving to reduce the impact necessary to drive the piles.

2. Pre-drilling: Pre-drilling a hole for a caisson can be used to place the caisson at or near its ultimate depth which eliminates most or all impact pile driving. Pre-drilling would require the use of synthetic drilling "muds"to displace water from the excavation while the caisson is placed; care in handling the volume of drilling mud would be required.

3. Using cast-in-place or auger cast piles: These consist of drilling a hollow shaft auger into the ground and then withdrawing the shaft while pumping grout through the shaft. This would not be applicable to the pile driving of steel plates but can be an acceptable alternative to driven pile foundations.

4. Using non-displacement piles: This consists of driving a non-displacement pile such as an H beam instead of concrete caissons, which would reduce vibration through reducing the amount of displacement and friction that would occur during pile driving. The driving of steel plates would be similar to non-displacement piles as they would create minimal displacement.

5. Using pile cushioning: Pile cushioning is when a resilient material such as rubber is placed between the driving hammer and the pile to increase the period of time over which the energy from the driver is imparted to the pile. Utilization of pile cushioning can reduce the vibration by a factor of 2 and is the most economical of vibration reduction method available. This measure is already recommended as Mitigation Measure 5.10-C2 that requires the use of a noise damper (pile cushioning).

6. Scheduling specific times to minimize disturbance at nearby vibration-sensitive sites. This measure is already recommended as Mitigation Measure 5.10-C1 that limits the hours when construction activities may occur and Mitigation Measure 5.10-C2 that requires the construction contractor to notify the nearby residences when pile driving would occur.

7. Using alternative non-impact drivers: Several types of proprietary pile driving systems have been designed specifically to reduce impact-induced vibration by using torque and down-pressure or hydraulic static loading. If one of these proprietary systems was specified as mitigation it would require the construction contractor to contract with the

> one company that operates the associated proprietary pile driving system, which removes the open bidding process and potentially greatly increases the project cost. However, Mitigation Measure 5.10-B1 established a performance standard that does not specify the equipment that must be used.

Mitigation Measure 5.10-B1 prohibits damaging vibration impacts and allows for the implementation of all of the above seven alternatives, or any other acceptable method that avoids the impacts...

Furthermore, the comment states that the shore of the natural area of recognized value could be impacted by potential vibration. See Response to Comment A8-166 regarding vibration and noise impacts to the natural environment.

Response to Comment A8-168

This comment expresses a concern that the noise analysis evaluated construction equipment noise based on averages. It is appropriate to address construction noise levels in averages because construction equipment has periods of full power noise as well as low power noise levels. Similar to construction activities in many jurisdictions, construction noise levels are only allowed during certain periods of the day. The County of San Luis Obispo does not have a noise level standard for construction noise.

This comment also refers to a monitoring program. The monitoring program that is required for the proposed project is the Mitigation Monitoring Program and the County of San Luis Obispo is responsible to implement this program.

This comment further asked about the Federal Transit Administration (FTA) reference in the Draft EIR. The Transit Noise and Vibration Impact Assessment, prepared by the FTA on May 2006, was utilized for its methodology on how to predict vibration levels, since neither the County nor State has adopted a specific methodology on how to assess vibration impacts. The FTA has no regulation authority over the proposed project. Since the County is the lead agency for the proposed project, the County's rules and regulations are relevant and have been used to evaluate the level of impact of the proposed project.

Response to Comment A8-169

This comment expresses a concern regarding the potential noise levels of the beepers that will be used. The equipment used on the proposed project will be required to have backup beepers that meet the OSHA requirements. Other than the pile driving, which has specific mitigation to control its noise, the type of construction equipment used for the proposed project would be typical of any development in the County where underground utilities are installed. Other developments in the County have not been required to utilize modulating beepers and no unique project factors have been identified that would justify placing greater restrictions on the equipment that may be used for this project.

Response to Comment A8-170

This comment asked that the 45 dB performance standard identified in Mitigation Measure 5.10-A3 for the backup diesel generator be applied to the property line and not the residence. Policy 3.3.3 in the San Luis Obispo County General Plan Noise Element identifies an interior noise level standard of 45 dBA CNEL or less and an exterior noise standard of 60 dBA CNEL. Therefore, the use of the 45 dB performance standard for the residence is appropriate.

Response to Comment A8-171

This comment is concerned with multiple STEP tank alarms going off during operation of Proposed Project 1. The STE septic tanks are to be cleaned out at regular intervals, which would limit most alarms from ever going off. If an alarm became operational, it would be considered an emergency activity, which according to Section 22.10.120 would be exempt from the Noise Ordinance.

Response to Comment A8-172

This comment expressed concern that the STEP pumps will make noise and cause noise issues with the adjacent homes. Based on discussion with Kennedy-Jenks, no audible noise is created from the operation of the STEP pumps, which consist of a submersible low horsepower pump located underground.

Response to Comment A8-173

This comment is concerned about the air vacuum valves that are part of the collection system. APCO http://www.apcovalves.com/airvalve.htm was contacted during the preparation of Appendix L-1, Noise Analysis, of the Draft EIR. APCO is the largest manufacturer of air vacuum valves and thousands of these valves are currently in operation and located in developed areas throughout the country. APCO has stated that they have not received a noise complaint about any of its air valves.

Response to Comment A8-174

This comment states that the Tonini site was not evaluated in the Fine Screen Report, and its discussion in the Draft EIR is insufficient. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-175

The comment raises the question of how can purchase of the highest quality prime agricultural land be justified for sprayfields given its short-term usefulness.

The Tonini parcel was selected for sprayfields based on alternatives analysis discussed in Section 7 of the Draft EIR, and on pages 5.1-23 through 5.1-30 of the expanded land use section. The Tonini parcel was selected to minimize, but not avoid impacts to prime agricultural lands. The above mentioned analysis in the expanded land use section demonstrates that the Tonini parcel represents the best location among all alternative sites considered to minimize impacts to prime agricultural lands.

Response to Comment A8-176

The comment asks why all reuse alternatives that affect agriculture included equally in the Draft EIR and appendices.

The rationale for selecting four proposed projects for the Draft EIR while eliminating other alternatives is found in multiple sources; in the Rough Screening Report in the Fine Screening Report, and in Section 7 of the Draft EIR.

Response to Comment A8-177

The comment asks three questions: 1) who will pay penalties associated with farmland conservation mitigation, 2) who is the project proponent, and 3) have administrative costs been estimated. Farmland conservation easements will be part of the project costs; administrative costs have not been estimated as a separate line item but are included in the overall project costs; they are nevertheless part of the project costs and will be borne by the residents served by the project.

Regarding the first and third questions, the commentor is referring to Mitigation Measure 5.11A-1 on page 5.1-39 of the expanded Agricultural Resources section. This mitigation measure is feasible and provides sufficient detail to meet the requirements under CEQA (Section 15126.4), and no further response is required. Regarding the second question, the County is the lead agency for the Project.

Response to Comment A8-178

The comment asks who will pay "opt out" taxes or penalties, if they should be imposed.

The comment is referring taxes or penalties associated with cancellation of a Williamson Act contract. However, as discussed on page 5.11-41 of the expanded Agricultural Resources section, the County will be publicly acquiring lands under a Williamson Act contract, rather than cancelling a contract. Pages 5.11-15 and 5.11-16 summarize the procedures (California Government Code 51290 through 51295, 51296.6) associated with publicly acquiring lands under a Williamson Act contract, and there is no reference to "opt out" taxes or penalties in this portion of the Code.

Response to Comment A8-179

The comment notes that the Tonini parcel has the highest rated soil compared to the other Ag zoned parcels. The comment asks why the Draft EIR selects Tonini as preferred site for treatment.

Also refer to Response to Comment A8-175 above.

Response to Comment A8-180

The comment makes the point that the applying treated effluent to sprayfields may render the prime agricultural land unusable for generations. The comment raises a question, regarding the mitigation plan for this loss of prime agricultural land.

Refer to Response to Comment A5-3 above

Response to Comment A8-181

The comment states that Impact 5.11-B (p. 5.11-15, in the Draft EIR) appears to be a misprint, and should read the project would conflict, rather than not conflict.

The above referenced statement is not a misprint. The proposed projects would be not conflict with Williamson Act provisions and would make the required findings for public acquisition of lands under a Williamson Act contract as stated on page 5.11-41 of the expanded agricultural resources section. Furthermore, the proposed projects would be consistent with use of AG zoned parcels, as discussed on pages 5.1-20 through 5.1-39 in the expanded land use section.

Response to Comment A8-182

The comment indicates that there is a misprint on page 5.11-3 that should read Appendix M-1, rather than Appendix N-1. The text is now revised to read:

> The complete anal*y*sis and rationale for determining a less than significant or no impact under these thresholds of significance can be found in Appendix M~~N~~-1.

Response to Comment A8-183

The comment raises the question about where are the details about tree removal on the Broderson parcel, and requests that a visual simulation of the trees removed and fencing, leachfield, and outbuildings be conducted.

Existing conditions of the Broderson parcel are described on pages 5.12-2 and 5.12-12, expanded section for Visual Resources. On page 5.12-32, the expanded section acknowledges there would be a significant impact to the visual surroundings of the Broderson parcel. However, the visual impact of the loss of vegetation over the 8-acre leachfield area is temporary and can be mitigated with re-vegetation. The loss of a portion of the eucalyptus trees does not contribute significantly to the short or long-term visual impact because the large number of trees to remain maintain the overall visual character of the site. Fencing would be open wire type that would not interrupt views; there are no above ground buildings proposed for the site. Views from locations open to public view (roadways) cannot capture the visual impact because the site is visible only from a limited set of public viewpoints at large distances; views from the site are interrupted by vegetation that would remain after the project is built. .

Response to Comment A8-184

The comment states that the statement on page 5.12-48 in the expanded section, Visual Resources, about project features primarily consisting of ground level elements for Proposed Projects 1 through 4 is misleading.

The referenced section on page 5.12-48 shall be changed to read:

> Project elements would primarily consist of ground level elements such as storage ponds, which would minimize visibility. Visual impacts associated with other project elements such as outbuildings, fences, and lighting would be mitigated to less than significant levels.

Response to Comment A8-185

The comment raises the question: Do Projects 2, 3, and 4 require an underground pump station or above grade pump station at the Mid-town site. On page 5.12-22 in the expanded Visual Resources section it is stated that an above ground pump station would be required and would be 25 by 14 by 17 feet; this facility would be the same for Proposed projects 2 through 4, but would not apply to Proposed Project 1. This section will be revised to read:

> Proposed Project 1 will include the incorporation of approximately 51,688 linear feet of 6-, 8-, and 10-inch PVC force mains, 263,165 linear feet of pressure sewer collector, 630 isolation valves and air release valves, 240 flushing ports, and 1,000 linear feet of creek crossings. Most of this infrastructure would be located below grade, including a submersible pump station. ~~There would be a power generating station above grade that would be approximately 25 feet by 14 feet, with an approximate height of 17 feet.~~

For Proposed Projects 2 through 4, the referenced sections expanded section, Visual Resources, on collection system infrastructure pages 24 (Proposed Project 2 and 3) and on page 27 would be revised as follows:

> The proposed collection system for this project would be a combination of gravity with facilities for pipelines, pump stations, blow-offs and clean-outs located entirely within roadway dedicated right-of-way and within the urban village reserve area. The collection system would include a standby power station above grade that would be approximately 25 feet by 14 feet, with an approximate height of 17 feet.

Response to Comment A8-186

The comment raises the question about providing a typical building plan for what will be developed at the Mid-town site, and a typical landscape plan for both the Broderson and Mid-town parcels.

Additional exhibits have been prepared since the Draft EIR was completed. The Preferred Project discussion includes a conceptual landscape plan (Appendix Q's Exhibit Q.3-7 in the Preferred Project Description) for the Mid-town site. At the time of this writing a conceptual landscape plan has not been developed for the Broderson site. However, any landscaping needed for the Broderson site will follow Mitigation Measure 5.12-3, as stated on page 5.12-45 of the expanded Visual Resources section.

Response to Comment A8-187

The comment raises a question about whether there is a full revegetation project for the entire 11 acres of the Mid-town site. The comment also makes a point that more specific information is needed on revegetation.

Revegetation is specified for the Tonini and Broderson parcels, as stated in Mitigation Measure 5.12 F-3 on page 5.12-45, and the revegetation plan for these parcels will be reviewed and approved by San Luis Obispo County, California Department of Fish and Game and U.S. Fish and Wildlife Service.

The above referenced mitigation measure will be revised to read:

> A revegetation plan shall <u>be prepared</u> to the satisfaction of the US Fish and Wildlife Service, California Department of Fish and Game and San Luis Obispo County for the portion of the Broderson site that will be disturbed by the installation of the disposal leachfields.

Response to Comment A8-188

The comment expresses a concern for the use of native plants in the disturbed soils at the Broderson leachfields. Construction of the Broderson leachfields would entail the removal of topsoil during the installation of the gravel bed and piping. After installation of the leachfield equipment, the topsoil, with native plant seeds would be replaced. Further seeding with native plants may be necessary to meet erosion control needs. The plants would have to be periodically removed for maintenance activities. A properly run leachfield should not have surficially wet soils. See Response to Comment A8-187.

Response to Comment A8-189

The comment indicates that staging areas have not been identified in the Draft EIR.

In the Preferred Project discussion Exhibit Q.3-1 depicts staging areas on Turri Road for the Tonini parcel and for the East Paso pump station. A description of these staging areas is included in Appendix Q.3, Preferred Project Description.

Response to Comment A8-190

The comment asks what a harvest well would look like, if they are needed.

The Preferred Project will not use harvest wells.

Response to Comment A8-191

This comment refers to the Alternatives Section 7 of the Draft EIR and expresses concern that the analysis fails to address the concept of minimizing impacts on water supply and seawater intrusion and those criteria of evaluation did not address collection alternatives. Further, the comment expresses concern about groundwater quality, safety objectives for Morro Bay and other operational and maintenance issues. Topical Response 3, Water Resources and Project Scope; and Topical

Response 4, Tertiary Treatment; and Topical Response 5, Alternative Collection Systems, address the discussion about water resources supply and collection system alternatives. Draft EIR Section 5.2 and Appendix D-1 address details of groundwater quality issues.

Response to Comment A8-192

This comment expresses a concern about the evaluation of the treatment technologies presented in the Draft EIR and asserts that sludge generation for each technology is not addressed or compared. Sludge generation and resultant hauling requirements are laid out in Table 3-7 and in the Air Quality analysis presented in Draft EIR Section 5.9, Air Quality, (and Appendix K). The reader can refer to these documents to see various sludge generation amounts for different treatment technologies.

Response to Comment A8-193

This comment expresses a concern that energy costs are not discussed for the various alternatives. The purpose of the Draft EIR is to provide an analysis of the potential environmental impacts associated with the proposed project. As for the feasibility of the use of the Broderson leachfields, see Topical Response 8, The Broderson Leachfield.

Response to Comment A8-194

This comment addresses a number of issues related to the Mid-town site, mitigation property at Broderson, and whether or not Broderson is needed for other forms of wastewater collection and treatment. A 0.25-acre portion of the Mid-town site is used for the pump station for gravity collection, but not for STEP. There is no differentiation for different collection or treatment systems regarding the Mid-town site. Future uses of the remaining portion of the site are subject to the normal land use development scenarios of development and not within the purview of this Draft EIR.

The comment further asserts that the Mid-town site, Broderson, and Tonini sites are not required if STEP, vacuum, or other collection systems are used. This comment is in error. The Tonini sprayfields, the Broderson leachfield and potentially the Mid-town site are all required for effluent pumping and disposal regardless of which collection system is employed. See Topical Response 5, Alternative Collection Systems; Tropical Response 7, Alternative Disposal Options; and Topical Response 8, The Broderson Leachfield.

Response to Comment A8-195

This comment expresses concerns about biosolids generation and disposal and asserts that the Draft EIR did not discuss fully impacts of varying amounts of sludge (biosolids) produced from different treatment systems. Pages 3-40 and 3-41 of the Draft EIR contain discussion about biosolids processing and disposal. Further, Appendix B to the Draft EIR and the Carollo Technical Memorandum on "Solids Handling Options" provide further discussion and details regarding biosolids management for various treatment processes and disposal. The reader is also referred to Chapter 5 of the Carollo Fine Screening Report for a discussion about biosolids.

Response to Comment A8-196

This comment expresses concerns about a number is issues related to the collection system lines for a gravity system and potential impacts of construction activities in building the system. Refer to Topical Response 13, Construction Excavation, for comments regarding construction activities of trenches.

Response to Comment A8-197

This comment expresses concerns about STEP systems not being accurately described regarding trenching needs, flows of pre-treated effluent rather than untreated effluent, and energy use of STEP systems versus gravity systems. Many of the comparisons of the different collection and treatment systems are contained in Table 3-7 of the Draft EIR. Further, tables in Chapter 3 of the Carollo Fine Screening Report contain information that provides comparisons of the different collection and treatment systems.

Response to Comment A8-198

This comment expresses a concern about the lack of comparison of STEP/STEG systems and the possibility of trenchless technology (boring) to place lines in the right-of-way rather than in the streets. There are many areas of Los Osos where the right-of-way is the width of the street so there is no shoulder where a line can be placed. Further, it is common practice to place the utility services in an unencumbered right-of-way, or street, for maintenance and repair purposes. See also Topical Response 13, Construction Excavation, for comments regarding construction activities of trenches.

Response to Comment A8-199

This comment expresses concerns about the discussion in the Draft EIR of vacuum systems. Because vacuum systems were considered a Level C Collection System (see Appendix P of the Draft EIR and the Carollo Fine Screening Report) many details of the vacuum were intentionally not described or evaluated further in the Draft EIR. Refer also to Topical Response 5, Alternative Collection Systems.

Response to Comment A8-200

This comment expresses a concern about Low Pressure Collection Systems and the use of grinder pumps and that the Draft EIR did not contain a full discussion about the system. See Response to Comment A8-199. Refer also to the Carollo Technical Memorandum "Low Pressure Collection System."

Response to Comment A8-201

This comment expresses a concern about the Draft EIR confusing the pros and cons of recognizing STEP/STEG systems are part of the treatment system and not the collection system. The Carollo Fine Screening Report (incorporated by reference by the Draft EIR) discusses the various collection and treatment systems. The Draft EIR also presents a discussion of the various systems in Section 7 (Alternatives). Refer also to Topical Response 5, Alternative Collection Systems.

Response to Comment A8-202

This comment expresses a concern about sludge handling from individual tanks versus other systems. The Carollo Technical Memorandum "Solids Handling" and the Fine Screening Report address these issues. There is also discussion in the Draft EIR in Section 7.3.6 and Appendix P.

Response to Comment A8-203

This comment makes reference to an EPA visit in the early 1990s that opposed a gravity system and recommended "mini-plants" be used for Los Osos. This comment has no reference or report on which this comment is based, nor has any subsequent project proposed for the community advocated use of "mini-plants" as a solution to the wastewater treatment solution for Los Osos. The technique was not considered for further study by the County early in the project development.

Response to Comment A8-204

This comment expresses a concern about lack of discussion of economic impacts related to water reuse components. The issue of recycled water reuse is addressed in Topical Response 2, Project Costs; Topical Response 3, Water Resource and Project Scope; and Topical Response 4, Tertiary Treatment.

Response to Comment A8-205

This comment states that Table 6-2, Buildout Population and Housing Data, is outdated and should be replaced with data based on the 2000 Census and the current Housing Element Update (2008). Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-206

This comment expresses a concern that mitigation measures were not included for growth inducement. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A8-207

This comment expresses a recommendation for the use of conservation easements along the pipeline from town to the treatment plan site. Because there are no comments on the contents of the Draft EIR, no further response is required.

AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN LUIS OBISPO

January 30, 2009

RECIEVED BY FAX
01/29/09
16:50

Mark Hutchinson, Environmental Programs Manager
San Luis Obispo County Dept. of Public Works
County Government Center
Room 207
San Luis Obispo CA 93408

SUBJECT: APCD Comments Regarding the Los Osos Wastewater Project Draft Environmental Impact Report

Dear Mr. Hutchinson,

Thank you for including the San Luis Obispo County Air Pollution Control District (APCD) in the environmental review process. We have completed our review of the proposed project located in the community of Los Osos and submit these comments for your consideration.

GENERAL COMMENTS

As a commenting agency in the California Environmental Quality Act (CEQA) review process for a project, the APCD assesses air pollution impacts from both the construction and operational phases of a project, with separate significant thresholds for each. **Please address the action items contained in this letter that are highlighted by bold and underlined text.**

CONSTRUCTION PHASE

Ozone Precursor and Toxic Air Contaminant

For all alternatives being considered, the air quality analysis indicates that construction phase air quality impacts will be considerably higher than the APCD's CEQA significance threshold of emissions per quarter total ozone precursors (NOx + ROG). These thresholds are when nitrogen oxide (NOx), reactive organic compound (ROG) or PM combustion emissions meet either of the following limits: more than 185 lbs/day or 2.5 ton/quarter. Compared to APCD's threshold of 2.5 tons per quarter, Alternative 1 is forecast to emit 54.79 tons of ozone precursor and 18.37 tons of PM. Further, the project's proximity to sensitive receptors throughout the project area and the length of construction activities (approx. 2 years) makes reduction of impacts through on-site mitigation critical. The APCD's strategy to address these impacts will be to insist on the highest possible on-site mitigation with any remaining exceedence mitigated through off-site measures. Best Available Control Technology (BACT) measures are needed when construction emissions exceed APCD mitigation thresholds as defined in section 6.2.1 in the Air Quality Handbook. A9-1

All project alternatives in the DEIR substantially exceed the ozone precursors (ROG and NOx) and PM thresholds. In order to mitigate the construction emissions to a level of insignificance, BACT will be required.

- Minimize the number of large pieces of construction equipment operating during any given period.

- Schedule construction related truck trips and construction equipment work during non-peak hours to reduce peak-hour emissions and overall daily/quarterly emissions (e.g. limit concurrent diesel operation).
- Maintain all construction equipment in proper tune according to manufacturer's specifications.
- Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road).
- All diesel construction equipment shall meet ARB's Tier 3 standard for off-road heavy-duty diesel engines.
- All on-road heavy-duty trucks that meet the ARB's 2007 or newer certification standard for on-road heavy-duty diesel engines.
- All on and off-road diesel equipment shall not be allowed to idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit.
- Electrify all portable equipment wherever possible throughout the project area.
- All diesel powered portable equipment used shall have tier 2 or tier 3 engines and retrofitted with an ARB level 3 verified diesel emissions control strategy (VEDEC).

A9-1 CONT

Following selection of contractor and prior to issuance of construction permit, the applicant will submit to the APCD a Construction Activity Management Plan (see item below) to be approved by APCD. This plan will be consistent with the above measures and include an updated air emissions analysis. The contractor will also provide the APCD with proof that APCD approved BACT has been implemented prior to the start of construction activity.

Construction Activity Management Plan (CAMP)
The CAMP should include but not be limited to the following elements:

A. Schedule construction truck trips during non-peak hours to reduce peak hour emissions;
B. Limit the length of the construction work-day period, if necessary; and,
C. Phase construction activities, if appropriate.
D. Construction Equipment composition and schedule including:
    1. Equipment Type
    2. Equipment Model
    3. Equipment Year
    4. Engine Type
    5. Engine Model
    6. Engine Year
    7. Engine Horsepower
    8. Schedule of use
E. Updated Air Quality Emissions Analysis
    An updated air quality emissions analysis consistent with the CAMP and mitigation measures above will be submitted to determine if additional measures (e.g. off-site mitigation) are required to reduce the air quality impact below the levels of significance.

Draft Environmental Impact Report for Los Osos Wastewater Project
January 30, 2009
Page 3 of 6

Off-Site Mitigation

Off-site mitigation is needed if impacts can not be fully mitigation on-site. Following approval of the CAMP and associated schedule and updated emissions impacts analysis, **APCD and applicant can establish off-site mitigation program based on the ozone precursor and PM exceedence. The applicant may use the funding of this program to implement APCD approved emission reduction projects near the project site or may pay that funding level plus a 15% administration fee to the APCD for the APCD to implement emission reduction projects in close proximity to the project. The applicant shall provide this funding at least two (2) months prior to the start of the project to help facilitate emission offsets that are real-time as possible.** A9-2

Developmental Burning

Effective February 25, 2000, **the APCD prohibited developmental burning of vegetative material within San Luis Obispo County.** Under certain circumstances where no technically feasible alternatives are available, limited developmental burning under restrictions may be allowed. This requires prior application, payment of fee based on the size of the project, APCD approval, and issuance of a burn permit by the APCD and the local fire department authority. The applicant is required to furnish the APCD with the study of technical feasibility (which includes costs and other constraints) at the time of application. If you have any questions regarding these requirements, contact the APCD Enforcement Division at 781-5912. A9-3

Dust Control Measures

Construction activities will generate fugitive dust, which could be a nuisance to local residents and businesses in close proximity to the proposed construction site. Dust complaints could result in a violation of the APCD's 402 "Nuisance" Rule. Any project with a grading area greater than 4.0 acres exceeds the APCD's PM10 quarterly threshold. **This project exceeds this threshold and is near potentially sensitive receptors and shall be conditioned to comply with all applicable Air Pollution Control District regulations pertaining to the control of fugitive dust (PM10) as contained in section 6.5 of the Air Quality Handbook and DEIR. All site grading and demolition plans noted shall list the following regulations:** A9-4

a. Reduce the amount of the disturbed area where possible,
b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible,
c. All dirt stock pile areas should be sprayed daily as needed,
d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities,
e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating native grass

seed and watered until vegetation is established,

f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD,
g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used,
h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site,
i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114,
j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site, and
k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.
l. If visible emissions of fugitive dust persist beyond a distance of 200 feet from the boundary of the construction site, all feasible measures shall be implemented to eliminate potential nuisance conditions at off-site receptors (e.g., increase frequency of watering or dust suppression, install temporary wind breaks where appropriate, suspend excavation and grading activity when winds exceed 25 mph)
m. The contractor will designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties will include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons will be provided to the SLOAPCD prior to the start of construction.

A9-4 CONT

Naturally Occurring Asbestos

The project site is located in a candidate area for Naturally Occurring Asbestos (NOA), which has been identified as a toxic air contaminant by the California Air Resources Board (ARB). Under the ARB Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, **prior to any grading activities at the site, the project proponent shall ensure that a geologic evaluation is conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the District (see Attachment 1). If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM.** This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by the APCD. Please refer to the APCD web page at *http://www.slocleanair.org/business/asbestos.asp* for more information or contact the APCD Enforcement Division at 781-5912.

A9-5

Construction Permit Requirements

Based on the information provided, we are unsure of the types of equipment that may be present during the project's construction phase. Portable equipment, 50 horsepower

A9-6

(hp) or greater, used during construction activities will require California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit. The following list is provided as a guide to equipment and operations that may have permitting requirements, but should not be viewed as exclusive. For a more detailed listing, refer to page A-5 in the District's CEQA Handbook.

- Power screens, conveyors, diesel engines, and/or crushers;
- Portable generators and equipment with engines that are 50 hp or greater;
- IC engines;
- Unconfined abrasive blasting operations;
- Concrete batch plants;
- Rock and pavement crushing;
- Tub grinders; and
- Trommel screens.

A9-6 CONT

To minimize potential delays, prior to the start of the project, please contact the APCD Engineering Division at (805) 781-5912 for specific information regarding permitting requirements.

OPERATIONAL PHASE

The APCD staff considered the operational impact of this project which indicates that operational phase impacts will likely be less than the APCD's CEQA Tier I significance threshold value of 10 lbs of emissions per day. Therefore, APCD is not requiring any operational phase mitigation measures for this project.

Operational Permit Requirements

Based on the information provided, we are unsure of the types of equipment that may be present at the site. Operational sources may require APCD permits. The following list is provided as a guide to equipment and operations that may have permitting requirements, but should not be viewed as exclusive. For a more detailed listing, refer to page A-5 in the District's CEQA Handbook.

A9-7

- Portable generators and equipment with engines that are 50 hp or greater;
- Electrical generation plants or the use of standby generator;
- Public utility facilities;
- Cogeneration facilities;

To minimize potential delays, prior to the start of the project, please contact the APCD Engineering Division at (805) 781-5912 for specific information regarding permitting requirements.

GREENHOUSE GAS IMPACTS AND MITIGATION

The DEIR reports very high amounts of Greenhouse Gas Emissions from the construction phase of the project; 3.7 million metric tons per year for two years. The DEIR identifies that this represents a class III impact. The APCD strongly disagrees and identifies proposed

A9-8

mitigation below. The APCD is unclear on how the GHG emissions were determined. The GHG analysis appears to be inconsistent with the project scope. Additional information defining quantification protocol should be submitted to APCD for review.

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. On June 19, 2008, the California Office of Planning and Research (OPR) released a Technical Advisory titled *CEQA and Climate Change: Addressing Climate Change Through CEQA Review.* In this document OPR verifies that GHG emissions are appropriate subjects for CEQA analysis that should be evaluated even without the presence of established thresholds. Further OPR establishes that lead agencies must assess whether emissions are individually or cumulative significant. As guidelines are not currently finalized, the APCD suggests that projects subject to CEQA should quantify project related GHG emissions and identify feasible mitigation. A9-8 CONT

APCD recommends the applicant identify and feasible mitigation for both construction and operations. Measures could include electrification of diesel engines, methane recovery, and C02 offset programs. The APCD is in the process of establishing a carbon-offsetting program for San Luis Obispo County.

Again, thank you for the opportunity to comment on this proposal. If you have any questions or comments, feel free to contact me at 781-5912.

Sincerely,

Darren Brown
Air Quality Specialist

DCB/lmg

cc: Tim Fuhs, Enforcement Division, APCD
Gary Willey, Engineering Division, APCD

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Air Pollution Control District, Darren Brown, January 29, 2009 (Letter A9)

Response to Comment A9-1

This comment states that Construction Activity Management Plan and proof of BACT is to be approved before issuance of construction permit. The Draft EIR contains these requirements in Mitigation Measures 5.9-C1 through 5.9-C4.

Response to Comment A9-2

This comment states that if off-site reductions are necessary, the applicant should provide funding at least two (2) months before start of project. This requirement was addressed in the Draft EIR in Mitigation Measure 5.9-C5, however the timing of the requirement suggested in the comment (two months prior to the start of the project) is not feasible. The project is being expedited to take the maximum advantage of potential federal stimulus funding, which is based on the commencement of construction before specific dates. Delaying the start of the construction to agree on these measures could increase the costs to residents substantially. Never the less, the County remains committed to fully mitigating air quality impacts and will endeavor to reach agreement with the APCD, if required, at the earliest possible time.

Response to Comment A9-3

This comment states that the APCD prohibits developmental burning in San Luis Obispo County. Because the proposed project does not entail developmental burning no further response is required.

Response to Comment A9-4

This comment lists regulations that should be included in all site grading and demolition plans. The Draft EIR includes these regulations in Mitigation Measure 5.9-C4.

Response to Comment A9-5

This comment states that prior to any grading activities, geologic evaluation must be conducted to determine if naturally occurring asbestos (NOA) is present. In the Project-Specific Impact Analysis related to Sensitive Receptors (Impact 5.9-D), the Draft EIR addresses this concern and states that an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program would be typically required to be prepared and the District would be required to review it prior to approval.

Response to Comment A9-6

This comment states that prior to start of project, the applicant should contact Engineering Division for permitting requirements. Whereas the APCD does not have permitting requirements for wastewater treatment plants as a facility, the Draft EIR addresses the potential need for permitting portable engines and portable equipment in Mitigation Measure 5.9-C3.

Response to Comment A9-7

This comment states the need for the applicant to contact the Engineering Division of the APCD prior to start of project to determine if its operational activities would require permitting. While

implementing Mitigation Measure 5.9-C3, discussion with the APCD will include all permitting needs.

Response to Comment A9-8

This comment expresses the concern that calculation for GHG emissions from construction activities presented in the Appendix K were inconsistent with the project scope and the concern that the Draft EIR identifies construction GHG emissions as a class III impact. This comment also suggests identification of feasible GHG mitigation for both construction and operations. The Draft EIR Appendix K did have an error in GHG calculations for construction emissions and Table 5.9-14 will be modified as follows:

~~Table 5.9-14: Construction GHG Emissions~~

~~System/Source~~	~~Metric Tons CO_2e per year~~			
	~~Project 1~~	~~Project 2~~	~~Project 3~~	~~Project 4~~
~~**Collection**~~				
~~On road vehicular~~	~~2,482,290~~	~~2,138,906~~	~~2,138,906~~	~~1,682,659~~
~~Off road equipment~~	~~408~~	~~382~~	~~382~~	~~382~~
~~Construction materials off site~~	~~804~~	~~1,243~~	~~1,243~~	~~960~~
~~**Collection Total**~~	~~**2,483,503**~~	~~**2,140,531**~~	~~**2,140,531**~~	~~**1,684,001**~~
~~**Conveyance**~~				
~~On road vehicular~~	~~361,361~~	~~380,836~~	~~380,836~~	~~393,944~~
~~Off road equipment~~	~~63~~	~~63~~	~~63~~	~~83~~
~~**Conveyance Total**~~	~~**361,424**~~	~~**380,899**~~	~~**380,899**~~	~~**394,027**~~
~~**Treatment**~~				
~~On road vehicular~~	~~490,602~~	~~505,688~~	~~505,688~~	~~490,478~~
~~Off road equipment~~	~~519~~	~~446~~	~~446~~	~~519~~
~~Construction materials off site~~	~~2,115~~	~~3,043~~	~~3,043~~	~~3,095~~
~~**Treatment Total**~~	~~**493,236**~~	~~**509,176**~~	~~**509,176**~~	~~**494,092**~~
~~**Disposal**~~				
~~On road vehicular~~	~~981,492~~	~~981,809~~	~~981,809~~	~~981,928~~
~~Off road equipment~~	~~838~~	~~838~~	~~838~~	~~838~~
~~**Disposal Total**~~	~~**982,330**~~	~~**982,647**~~	~~**982,647**~~	~~**982,766**~~
~~**GRAND TOTAL**~~	~~**4,320,493**~~	~~**4,013,254**~~	~~**4,013,254**~~	~~**3,554,886**~~
~~Source: MBA 2008.~~				

Table 5.9-14: Construction GHG Emissions

System/Source	Metric Tons CO_2e per year			
	Project 1	Project 2	Project 3	Project 4
Collection/Conveyance				
On road vehicular	1,422	1,116	1,116	1,142
Off road equipment	440	414	414	424
Construction materials off-site	804	1,243	1,243	960
Collection/Conveyance Total	**2,666**	**2,773**	**2,773**	**2,526**
Treatment				
On road vehicular	245	205	246	245
Off road equipment	519	446	489	519
Construction materials off-site	2,115	3,043	3,043	3,095
Treatment Total	**2,879**	**3,693**	**3,778**	**3,859**
Disposal				
On road vehicular	491	670	491	491
Off road equipment	838	924	838	838
Disposal Total	**1,328**	**1,594**	**1,328**	**1,329**
GRAND TOTAL	**6,874**	**8,060**	**7,879**	**7,713**
Source: MBA 2008.				

With regard to the concern that the Draft EIR identifies construction GHG emissions as a class III impact, the significance determination for construction-related GHG emissions in Appendix K of the Draft EIR was evaluated under the general acceptance of the San Luis Obispo Air Pollution Control District (District), whose staff was contacted on October 22, 2008. The Draft EIR was analyzed based on the SLOAPCD's determination that, with regards to construction, the temporary nature of the GHG emissions would probably render them inconsequential. Following the direction given at the time and considering that the modified emissions associated with construction GHG emissions, the significance determination reached in the Draft EIR remains viable and no mitigation measures are required.

Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Financial Assistance
1001 I Street • Sacramento, California 95814 • (916) 341-5700 FAX (916) 341-5707
Mailing Address: P.O. Box 944212 • Sacramento, California • 94244-2120
Internet Address: http://www.waterboards.ca.gov

Arnold Schwarzenegger
Governor

JAN 30 2009

Mr. Mark Hutchinson
County of San Luis Obispo
Department of Public Works
1050 Monterey, County Govt. Center, Room 207
San Obispo, CA 93402

RECEIVED
FEB - 4 2009
COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PUBLIC WORKS

A10
Page 1 of 13

Dear Mr. Hutchinson:

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE COUNTY OF SAN LUIS OBISPO (COUNTY); LOS OSOS WASTEWATER PROJECT (PROJECT); CLEAN WATER STATE REVOLVING FUND (CWSRF) NO. C-06-5230-110; STATE CLEARINGHOUSE (SCH) NO. 2007121034

Thank you for the opportunity to review the Draft EIR. We understand that the County is pursuing funds from the Clean Water State Revolving Fund (CWSRF) Program for the Project. As a funding agency and a State agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Resources Control Board (State Water Board) is providing the following information for the California Environmental Quality Act (CEQA) document prepared for the Project.

Please provide State Water Board with the following documents applicable to the proposed Project: (1) eight copies of the draft and final EIR, (2) the resolution certifying the EIR, making CEQA findings, and adopting a Statement of Overriding Considerations, if applicable, (3) all comments received during the review period and the County's responses to those comments, (4) the adopted Mitigation Monitoring and Reporting Program, and (5) the Notice of Determination filed with the Governor's Office of Planning and Research. In addition, we would appreciate notices of any hearings or meetings held regarding environmental review of any project to be funded by the State Water Board.

A10-1

The CWSRF Program is partially funded by the U.S. Environmental Protection Agency (USEPA) and requires additional "CEQA-Plus" environmental documentation and review. The State Water Board is required to consult directly with agencies responsible for implementing federal environmental laws and regulations. Any environmental issues raised by federal agencies or their representatives will need to be resolved prior to State Water Board approval of a CWSRF funding commitment for the proposed Project. Please note the State Water Board has included additional information for the CWSRF Program and CEQA process (enclosures).

It is important to note that prior to a CWSRF funding commitment, projects are subject to provisions of the Federal Endangered Species Act and must obtain Section 7 clearance from the U.S. Fish and Wildlife Service (USFWS), and/or National Marine Fisheries Service (NMFS) for any potential effects to special status species. Please be advised that the State Water Board will consult informally with USFWS, and/or NMFS regarding all federal special status species the Project has the potential to impact if the Project is to be funded under the CWSRF Program. USEPA will initiate formal consultation with USFWS and NMFS when necessary. The County will need to identify whether the Project will involve any direct effects from construction activities or indirect effects, such as growth inducement, that may affect federally listed threatened, endangered, or candidate species that are known, or have a potential to occur on-site, in the surrounding areas, or in the service area, and to identify applicable conservation measures to reduce such effects.

In addition, CWSRF projects must comply with federal laws pertaining to cultural resources, specifically Section 106 of the National Historic Preservation Act. USEPA has delegated to the State Water Board responsibility for ensuring compliance with Section 106 for the CWSRF Program. The State Water Board's Cultural Resources Officer (CRO) must consult directly with the California State Historic Preservation Officer (SHPO). SHPO consultation is initiated when sufficient information is provided by the CWSRF applicant. Please contact the CRO, Ms. Cookie Hirn, at (916) 341-5690, to find out more about the requirements. Note that the County will need to identify the Area of Potential Effects (APE), including construction, staging areas, and depth of any excavation. The APE is three-dimensional and includes all areas that may be affected by the Project. The APE includes the surface area and extends below ground to the depth of any Project excavations.

Other federal requirements pertinent to the Project under the CWSRF Program include the following: A10-1 CONT

A. Compliance with the federal Clean Air Act (CAA): (a) Provide air quality studies that may have been done for the Project; and (b) if the Project is in a nonattainment area or attainment area subject to a maintenance plan; (i) provide a summary of the estimated emissions (in tons per year) that are expected from both the construction and operation of the Project for each federal criteria pollutant in a nonattainment or maintenance area, and indicate if the nonattainment designation is moderate, serious, severe, or extreme (if applicable); (ii) if emissions are above the federal de minimis levels, but the Project is sized to meet only the needs of current population projections that are used in the approved State Implementation Plan for air quality, quantitatively indicate how the proposed capacity increase was calculated using population projections.

B. Compliance with the Farmland Protection Policy Act: Identify whether the Project will result in the conversion of farmland. State the status of farmland (Prime, Unique, or Local Statewide Importance) in the Project area and determine if this area is under a Williamson Act Contract.

C. Compliance with the Wild and Scenic Rivers Act: Identify whether or not any Wild and Scenic Rivers would be potentially impacted by the Project and include conservation measures to minimize such impacts.

As a responsible Agency under CEQA, State Water Board staff may have further comments in addition to the comments below. Please continue to consult with State Water Board staff through the CEQA process.

Following are specific comments on the Draft EIR:

1. Page 5.5-73 of Appendix G-2 Biological Resources states "This section analyzes proposed projects 1 through 4 as described in detail in Section 5.1 of the Draft EIR." Section 5.1 of the Draft EIR does not describe proposed projects 1 through 4 in detail. Section 5.1 contains a "how to read and understand" section as well as a land use and planning section. Please clarify where in the EIR proposed Projects 1 through 4 are described in detail. A10-2

2. Page 5.5-73 of appendix G-2 states "mitigation measures for all proposed projects 1 through 4 are provided on pages 5.5-54 though 5.5-62 and pages 5.5-78 and 5.5-79 of this section of the Draft EIR." Section 5.5 of Draft EIR includes pages 5.5-1 through 5.5-52. Please clarify where mitigation measures for the proposed Projects are located in the Draft EIR. A10-3

3. Mitigation Measure 5.5-A1 states "The proposed project results in a take of federally listed species and their habitat. Prior to project approval, **the County shall enter into formal consultation with the USFWS and NMFS**. A Biological Opinion (BO) will be prepared by the USFWS and NMFS for any proposed action that may result in the potential take of a listed species and its habitat." For CWSRF-funded Projects the State Water Board initiates informal consultation with USFWS and/or NMFS, or will request the USEPA initiate formal consultation. Please submit any completed biological assessments for the Project to the State Water Board. A10-4

4. Mitigation Measure 5.5-A14 states "The proposed project should minimize to the maximum extent feasible any potential impacts to non-listed plant and lichen species designated as sensitive by the CNPS, including Blochman leafy daisy, saint's daisy, San Luis Obispo wallflower, curly-leafed monardella, dune almond, spiraled old man's beard, Los Osos black and white lichen, long-fringed parmotrema, and splitting yarn lichen." Please change "should" to "shall" or "must," since "should" is defined in the CEQA Guidelines (Article 1, Section 15005) as an advisory element, whereas "shall" or "must" identifies a mandatory element. For more information on CEQA terminologies refer to CEQA guidelines (Article 1, Section 15005). Please make this correction for all mitigation measures listed for the proposed Project. A10-5

5. Page 5.11-6 states "Depending on the final design and siting of the facility, approximately 20 acres of Prime Agricultural Land and or Farmland of Statewide Importance as defined by the FMMP as well as the California Coastal Commission would be affected." CEQA Guidelines Article 7, Section 15093, states "CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project." If the County plans to continue with the Project with a significant and unavoidable impact, a Statement of Overriding Considerations (SOC) needs to be prepared. For CWSRF funding, provide a copy of the SOC to the State Water Board. A10-6

6. Page 5.5-104 of Appendix G-2 Biological Resources states "All construction access and staging would be restricted to existing disturbed upland areas. Implementation of avoidance measures and construction BMPs would reduce potential impacts to this species to less than significant." Please identify Project specific BMPs and avoidance measures that will reduce potential impacts to the California red-legged frog. A10-7

7. Page 5.3-23 of Appendix E states that "the Project would include excavating a trench to place pipelines across the Los Osos Creek drainage." The EIR then mentions that "the implementation of measures described in the Stormwater Pollution Prevention Plan, the Sedimentation and Erosion Control Plan, and the Stormwater Management Plan would ensure that construction activities would not violate water quality standards or waste discharge requirements" and therefore, no mitigation measures are listed under Section 5.3 (Drainage). However, Biological Resources Mitigation Measures 5.5-A6 and 5.5-A7 directly mitigate the impacts caused by excavating trenches in Los Osos Creek. Clarify if these mitigation measures should also be listed under Drainage since they address potential water quality impacts. A10-8

8. Mitigation Measure 5.5-A6 states that "all Project work areas within and around Los Osos Creek shall be restored to pre-existing contours upon completion of the work." Include the methods that will be implemented to restore the pre-exisiting conditions of the creek and how the disturbed area of the creek will be monitored to ensure the success of the reestablishment of the creek and surrounding areas. A10-9

9. Page 5.6-13 states that "Pumps associated with the collection system, including grinder pumps and pump stations will be constructed with a design/build alternative" and that "Depending upon location, some of these could have the potential to impact historic architectural structures." Please discuss how the placement of these pumps and pump stations may potentially affect historic architectural structures. A10-10

10. Page 5.6-18 Impact 5.6-E states that "The project would conflict with the California Coastal Act of 1976, Section 30244." This Section of the Act states that "Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required." Please discuss how the Project would conflict with Section 30244 of the California Coastal Act. A10-11

11. Page 5.6-36 states that "The placement of the treatment plant would have an effect on the prehistoric and historic era archeological site (SLO-2569) situated on the Giacomazzi parcel." Please discuss the effects that the treatment plant placement will have on SLO-2569. A10-12

12. Page 5.6-36 states that "it is unknown whether there would be effects to previously recorded archeological sites SLO-13 or SLO-25." The County will need to further assess these sites and associated information and discuss the potential effects to archeological sites SLO-13 or SLO-25 as a result of Project operation and construction. A10-13

13. Page 5.6-36 states that "Sprayfields proposed for the Tonini parcel would affect three prehistoric sites (SLO-2571, SLO-2572, and SLO-2573) and one historic-era site (SLO-2574H)." Please discuss how construction and operation of the sprayfields will affect the four sites and the extent to which these sites will be impacted. A10-14

14. The County has stated that SLO-1212, SLO-1795, SLO-2007 are "Recorded sites that would not be significantly affected based on prior evaluation." Please discuss the evaluations that were used to determine that these sites would not be impacted by Project construction and operation. Identify how the conclusion was made. A10-15

15. Page 5.9-23 states that "The County has been designated as a nonattainment area for the State PM_{10} standard. The County achieved ozone attainment status in January 2004." However, table 5.9-6: SLOAPCD Attainment Status states that both Ozone and PM_{10} are in nonattainment, which contradicts the previous statement of the County's attainment status for Ozone. Please specify whether or not Ozone is in attainment for state standards within the document and make the narrative and table 5.9-6 consistent with each other. A10-16

16. Page 5.9-39 states " Proprosed Project 2 would result in a potential significant NO_x and PM_{10} emissions impacts during construction of the collection system." Please specify which mitigation measure will mitigate any potential significant impacts due to NO_x and PM_{10} emissions. A10-17

Thank you once again for the opportunity to review the County's environmental document. If you have any questions or concerns, please feel free to contact me at (916) 341-5690, or by e-mail at MHirn@waterboards.ca.gov

Sincerely,

for Cookie Hirn
Cultural Resources Officer

Enclosures (4)

cc: State Clearinghouse
(Re: SCH# 2007121034)
P. O. Box 3044
Sacramento, CA 95812-3044

Ms. Julie Vanderwier
U.S. Fish and Wildlife Service
Ventura Field Office
2493 Portola Road # B
Ventura, CA 93003-7726

ENVIRONMENTAL COMPLIANCE PROCESS GUIDELINES

These guidelines detail the steps that applicants must take in complying with environmental requirements for the Clean Water State Revolving Fund (CWSRF) Program administered by the State Water Resources Control Board (State Water Board), Division of Financial Assistance (Division).

Applicants for State Water Board financial assistance must comply with the California Environmental Quality Act (CEQA). Additionally, the State Water Board is required to comply with CEQA when funding a project. The Division's Regional Programs Unit (RPU) fulfills the State Water Board's responsibility by reviewing the CEQA documents provided by the applicant to develop the State Water Board's findings. Applicants also may be required to comply with additional federal cross-cutting environmental regulations. *Refer to the attachments following these guidelines, which include: CEQA Process Flow Chart, CEQA Checklist for the Applicant, Evaluation Form for Environmental Review and Federal Coordination, and Basic Criteria for Cultural Resources Reports.*

Since each project is unique, applicants should contact the Division's RPU early in the project planning process. Please contact **Ms. Michelle Jones at (916) 341-6983** for more information on the CWSRF environmental compliance process and the Division's Cultural Resources Officer, **Ms. Cookie Hirn at (916) 341-5690** for compliance with Section 106 of the National Historic Preservation Act.

It is important for the State Water Board to receive the CEQA document during the draft stage for review and comment. This helps ensure that the State Water Board's comments are addressed during the draft stage rather than after the CEQA document has been adopted or certified by the Lead Agency. Applicants are strongly encouraged to submit the draft CEQA document to the State Water Board's Project Manager before or during the State Clearinghouse review period. Administrative draft CEQA documents may also be submitted to the State Water Board's Project Manager for review and comment by the RPU before the State Clearinghouse review period begins. *Refer to the attached CEQA Process Flowchart for when Responsible Agency and Lead Agency coordination is necessary.*

The CEQA and CEQA Guidelines can be accessed at: http://ceres.ca.gov/ceqa/.

Additional guidance can be obtained from the *CEQA Deskbook 1999 Edition with 2001 Supplement*, published by Solano Press Books. This book provides a step-by-step guide on how to comply with CEQA and may explain information in a more straight-forward manner than the CEQA Guidelines.

Note: If the applicant is not the Lead Agency under CEQA (i.e., a responsible agency under CEQA that is using another agency's CEQA document), the applicant will need to:

1. Make its own CEQA findings and approve the mitigation measures applicable to the proposed funded project and any applicable Statement of Overriding Considerations;
2. File the Notice of Determination (NOD) with the Governor's Office of Planning and Research (OPR) and;
3. Provide to the State Water Board's Project Manager a copy of the resolution or meeting minutes approving the project and adopting or certifying the CEQA document and the date-stamped copy of the NOD filed with the OPR.

If the applicant uses a Notice of Exemption (NOE), the applicant files the NOE with the County Clerk of each county in which the project will be located. Since the project is being funded by the State Water Board, the applicant also must file the NOE with the OPR. This reduces the statute of limitations from 180 days to 35 days, and notifies other state agencies and the public that the applicant determined the project was exempt from the CEQA requirements. There is no cost for filing an NOE with the OPR.

State Water Resources Control Board (State Water Board)
Clean Water State Revolving Fund Program

Evaluation Form for Environmental Review and Federal Coordination

1. **Federal Endangered Species Act, Section 7:**
Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may affect federally listed threatened or endangered species that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

☐ No. Discuss why the project will not impact any federally listed special status species:

_____
_____
_____
_____
_____
_____

☐ Yes. Include information on federally listed species that could potentially be affected by this project and any proposed avoidance and compensation measures so that the State Water Board can initiate informal/formal consultation with the applicable federally designated agency. Document any previous ESA consultations that may have occurred with the project.

Attach project-level biological surveys, evaluations analyzing the project's direct and indirect effects on special-status species, and a current species list for the project area.

2. **National Historic Preservation Act, Section 106:**
Identify the Area of Potential Effects (APE), including construction, staging areas, and depth of any excavation. (Note that the APE is three dimensional and includes all areas that may be affected by the project, including the surface area and extending below ground to the depth of any project excavations.)

_____
_____
_____
_____
_____
_____
_____
_____

Attach a current records search with maps showing all sites and surveys drawn in relation to the project area, and records of Native American consultation.

3. <u>Clean Air Act:</u> Is the project subject to a State Implementation Plan (SIP) conformity determination?

☐ No. The project is in an attainment or unclassified area.

☐ Yes. The project is in a nonattainment area or attainment area subject to maintenance plans. Include information to indicate the nonattainment designation (e.g. moderate, serious or severe), if applicable. If estimated emissions (below) are above the federal de minimis levels, but the project is sized to meet only the needs of current population projections that are used in the approved SIP for air quality, then quantitatively indicate how the proposed capacity increase was calculated using population projections.

Air Basin Name: _____

Provide the estimated project construction and operational air emissions (in tons per year) in the chart below.

Attach any air quality studies that may have been done for the project.

Pollutant	Status (Attainment, Nonattainment or Unclassified)	Threshold of Significance for the Area (if applicable)	Construction Emissions (Tons/Year)	Operation Emissions (Tons/Year)
Carbon Monoxide (CO)				
Ozone (O_3)				
Oxides of Nitrogen (NO_x)				
Particulate Matter (PM_{10})				
Reactive Organic Gases (ROG)				
Sulfur Dioxide (SO_2)				
Volatile Organic Compounds (VOC)				

4. <u>Coastal Zone Management Act:</u>
Is any portion of the project site located within the coastal zone?

☐ No. The project is not within the coastal zone.

☐ Yes. Describe the project location with respect to coastal areas, and the status of the coastal zone permit:

_____
_____
_____
_____
_____
_____

5. **Farmland Protection Policy Act:**
Is any portion of the project site located on important farmland?

☐ No. The project will not impact farmland.

☐ Yes. Include information on the acreage that would be converted from important farmland to other uses. Indicate if any portion of the project site is located within Williamson Act control and the amount of affected acreage:

6. **Flood Plain Management – Executive Order Number 11988:**
Is any portion of the project site located within a 100-year floodplain as depicted on a floodplain map or otherwise designated by the Federal Emergency Management Agency?

☐ No. Provide a description of the project location with respect to streams and potential floodplains:

☐ Yes. Describe the floodplain, and include a floodplain map and a floodplains/wetlands assessment. Describe any measures and/or project design modifications that would minimize or avoid flood damage by the project:

7. **Migratory Bird Treaty Act:**
Will the project affect protected migratory birds that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

☐ No.

☐ Yes. Discuss the impacts (such as noise and vibration impacts, modification of habitat) to migratory birds that may be directly or indirectly affected by the project and mitigation measures to reduce or eliminate these impacts. Include a list of all migratory birds that could occur where the project is located:

8. **Protection of Wetlands – Executive Order Number 11990:**
Does any portion of the project area contain areas that should be evaluated for wetland delineation or require a permit from the U.S. Army Corps of Engineers?

☐ No. Provide the basis for such a determination:

_____
_____
_____

☐ Yes. Describe the impacts to wetlands, potential wetland areas, and other surface waters, and the avoidance, minimization, and mitigation measures to reduce such impacts. Provide the status of the permit and information on permit requirements:

_____
_____
_____
_____
_____
_____

9. **Wild and Scenic Rivers Act:**
Is any portion of the project located within a wild and scenic river?

☐ No. The project will not impact a wild and scenic river.

☐ Yes. Identify the wild and scenic river watershed and project location relative to the affected wild and scenic river:

_____
_____
_____
_____
_____
_____

Identify watershed where the project is located:_____

10. **Source Water Protection:**
Is the project located in an area designated by the U.S. Environmental Protection Agency, Region 9, as a Sole Source Aquifer? (For more information, please visit http://www.epa.gov/region09/water/groundwater/ssa.html.)

☐ No. The project is not within the boundaries of a sole source aquifer.

☐ Yes. Identify the aquifer (e.g., Santa Margarita Aquifer, Scott's Valley, the Fresno County Aquifer, the Campo/Cottonwood Creek Aquifer or the Ocotillo-Coyote Wells Aquifer):

_____

BASIC CRITERIA FOR CULTURAL RESOURCES REPORTS

FOR SECTION 106 CONSULTATION WITH THE STATE HISTORIC PRESERVATION OFFICER (SHPO) UNDER THE NATIONAL HISTORIC PRESERVATION ACT (NHPA)

CURRENT RECORDS SEARCH INFORMATION

- A current (less than a year old) records search from the appropriate Information Center is necessary. The records search must include maps that show all recorded sites and surveys in relation to the area of potential effects (APE) for the project.
- The APE is three-dimensional and includes all areas that may be affected by the project. The APE includes the surface area and extends below ground to the depth of any project excavations.
- The records search request should be made for an area larger than the APE. The appropriate area varies for different projects but must be drawn large enough to provide information on what types of sites may exist in the vicinity.

NATIVE AMERICAN AND INTERESTED PARTY CONSULTATION

- Native American and interested party consultation should be initiated at the beginning of any cultural resource investigations. The purpose is to gather information from people with local knowledge that may be used to guide research.
- A project description and map should be sent to the Native American Heritage Commission (NAHC) when the applicant requests a check of their Sacred Lands Files. The Sacred Lands Files include religious and cultural places that are not recorded at the information centers.
- The NAHC will include a list of Native American groups and individuals with their response. A project description and maps must be sent to everyone on the list asking for information on the project area.
- Similar letters should be sent to local historical organizations and other interested parties.
- Follow-up contact should be made by phone, if possible, and a contact log must be included in the report.

REPORT TERMINOLOGY

- A cultural resources report used for Section 106 consultation should use terminology consistent with the NHPA.

- Being consistent with the NHPA does not mean that the report needs to be "filled" with passages and interpretations of the regulations; the SHPO reviewer already knows the law.

- If "findings" are made, they must be one of the four "findings" listed in Section 106. These include:

  "No historic properties affected" (no properties are within the APE, including the below ground APE).

  "No effect to historic properties" (properties may be near the APE but the project will not impact them).

  "No adverse effect to historic properties" (the project may affect historic properties but the impacts will not be adverse).

  "Adverse effect to historic properties." *Note: the SHPO must be consulted at this point. If your consultant proceeds on his/her own, his/her efforts may be wasted.*

WARNING PHRASES IN ALREADY PREPARED CEQA REPORTS

- A finding of **"no known resources"** does not mean anything. The consultant's job is to find out if there are resources within the APE or to explain why they are not present.

- **"The area is sensitive for buried archaeological resources,"** followed by a statement that **"monitoring is recommended as mitigation."** Monitoring is not acceptable mitigation. A reasonable effort should be made to find out if buried resources are present in the APE.

- **"The area is already disturbed by previous construction."** This statement may be true, but documentation is still needed to show that the new project will not affect cultural resources. As an example, an existing road can be protecting a buried archaeological site. Or, previous construction may have impacted an archaeological site that was never documented.

- No mention of **"Section 106."** A report that gives adequate information for compliance with the California Environmental Quality Act may not be sufficient to comply with Section 106.

Please contact Ms. Cookie Hirn with any questions on cultural resources reports.

Cookie Hirn
State Water Resources Control Board
Cultural Resources Officer
916-341-5690
Mhirn@waterboards.ca.gov

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
CHECKLIST FOR THE APPLICANT
What to Submit to your State Water Board's Project Manager

If project is covered under a **CEQA Categorical or Statutory Exemption**, submit a copy of the following:

- ❑ **Notice of Exemption (filed with the Governor's Office of Planning and Research)**
- ❑ **List of Best Management Practices (BMPs) and their locations, if project implements BMPs**

If project is covered under a **Negative Declaration**, submit a copy of the following:

- ❑ **Draft and Final Initial Study/Negative Declaration**
  (or Mitigated Negative Declaration, if applicable)
  - ❑ Comments and Responses to the Draft
  - ❑ Mitigation Monitoring and Reporting Plan (if using a Mitigated Negative Declaration)
- ❑ **Resolution approving the CEQA documents**
  - ❑ Adopting the Negative Declaration
  - ❑ Making CEQA Findings
- ❑ **Notice of Determination (filed with the Governor's Office of Planning and Research)**

If project is covered under an **Environmental Impact Report (EIR)**, submit a copy of the following:

- ❑ **Draft and Final EIR**
  - ❑ Comments and Responses to the Draft
  - ❑ Mitigation Monitoring and Reporting Plan (MMRP)
- ❑ **Resolution approving the CEQA documents**
  - ❑ Certifying the EIR and adopting the MMRP
  - ❑ Making CEQA Findings
  - ❑ Adopting a Statement of Overriding Considerations for any adverse impact(s) that cannot be avoided or fully mitigated if project is implemented
- ❑ **Notice of Determination (filed with the Governor's Office of Planning and Research)**

If EIR is a joint CEQA/National Environmental Policy Act document (EIR/Environmental Impact Statement or EIR/Environmental Assessment), submit the applicable Record of Decision and/or Finding of No Significant Impact.

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State Water Resources Control Board, Cookie Hirn, February 4, 2009 (Letter A10)

Response to Comment A10-1

This comment requests copies of the Draft EIR and expresses concern regarding the proposed project's compliance with federal laws. Copies of the Draft EIR were provided in November 2008. The Final EIR will be provided to the State Water Resources Control Board (SWRCB) when completed.

We are aware of the Section 7 and Section 106 requirements and have engaged the SWRCB in discussions with regard to consultation with the US Fish and Wildlife Service, National Marine Fisheries and the California State Historic Preservation Office.

The County has refined the preferred project and can and will provide more details with regard to the APE and the direct and indirect impacts associated with the project.

Response to Comment A10-2

This comment expresses a desire for clarification regarding the location of the description for Proposed Projects 1 through 4. Section 3 of the Draft EIR provides all of the details on the four projects. Since the project consists of a number of components, a description for each component is discussed in Sections 3.3.2 and 3.3.3. Table 3-7 of the Draft EIR provides a summary of each of the Proposed Projects. Additional information of the project description is provided in Appendix B as well.

Response to Comment A10-3

This comment expresses a desire for clarification regarding the location of mitigation measures for the proposed projects. Section 5.5 of the Draft EIR contains all of the mitigation measures discussed in Expanded Analyses of Appendix G-2. Section 5.5 of the Draft EIR only discusses significant impacts and thus all of the mitigation measures have not been included in the Draft EIR Section 5.5.

Response to Comment A10-4

This comment expresses a desire for any completed biological assessments to be submitted to the SRWCB. The County is currently preparing a biological assessment for submittal to the SRWCB. Refinements to the project are being completed to further reduce impacts associated with the project. When completed the biological assessment will be submitted and discussions on consultation can begin through the SRWCB.

Response to Comment A10-5

This comment states that a correction regarding Mitigation Measure 5.5-A14 needs to be made. See Response to Comment A7-7 for revisions to 5.5-A13. The language for mitigation measures with regard to non-listed plant and lichen species is changed to read as follows:

5.5-A14 The proposed project <u>shall</u> minimize to the maximum extent feasible any potential impacts to non-listed plant and lichen species designated as

sensitive by the CNPS, including Blochman leafy daisy, saint's daisy, San Luis Obispo wallflower, curly-leafed monardella, dune almond, spiraled old man's beard, Los Osos black and white lichen, long-fringed parmotrema, and splitting yarn lichen. A qualified biologist shall conduct botanical surveys within suitable coastal sage scrub habitat on the Broderson and Mid-town properties to identify all sensitive plant and lichen species within and in the immediate vicinity of the proposed impact area.

Surveys shall be conducted during the local blooming periods for each species, where applicable, and according to recommendations and guidelines prepared by the CDFG and CNPS. All specimens shall be clearly demarcated with flagging and avoided to the maximum extent feasible during construction.

Response to Comment A10-6

This comment requests that if the project that is approved will result in a significant unavoidable adverse impact, a statement of overriding considerations would be required. The County of San Luis Obispo understands that a statement of overriding considerations is required for a significant unavoidable adverse impact on farmland.

Response to Comment A10-7

This comment is concerned with impacts to red-legged frog within the project area. See response to comment A7-16.

Mitigation Measure 5.5-A8 shall be therefore be revised to state the following:

5.5-A8 ~~Additional specific avoidance measures, preconstruction survey requirements, and mitigation measures, if required, will be provided by the USFWS consultation with regard to California red-legged frog.~~

~~Prior to project construction, the County shall retain a qualified biologist to conduct pre-construction surveys for the California red-legged frog according to protocol approved by the USFWS. Surveys shall be conducted within all areas that at are determined to contain suitable breeding habitat for this species and that occur within 100 feet of proposed construction, or at a distance determined through USFWS consultation. These areas shall include the following: wetlands within the community of Los Osos; tributaries T-1 and T-2 to Warden Creek on the Tonini property; tributaries W-3, W-4, W-5, W-5a, and W-5b to Warden Creek along the Los Osos Valley Road right-of-way; Warden Creek at the Turri Road crossing; Warden Lake on the Branin property; tributaries W-1 and W-2 to Warden Creek on the Giacomazzi property, and Los Osos Creek at the Los Osos Valley Road crossing.~~

~~All areas that are determined to be occupied by California red-legged frog shall be avoided during all phases of the proposed project unless authorized and permitted by the USFWS. Construction avoidance and minimization measures will be required for all activities within or adjacent to suitable breeding habitat for this species, as determined through USFWS consultation.~~

~~Additional conservation measures may be determined through the USFWS consultation.~~

EPA shall complete FESA Section 7 formal consultation with USFWS prior to initiating construction activities.

Only USFWS-approved biologists shall be permitted to participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. Ground disturbance shall not begin until written approval is received from the USFWS that the biologist is qualified to conduct the work.

Prior to project construction, the County shall retain a qualified biologist to conduct pre-construction surveys for the California red-legged frog according to protocol approved by the USFWS. Surveys shall be conducted within all areas that at are determined to contain suitable breeding habitats for this species and that occur within 100 feet of proposed construction, or at a distance determined through USFWS consultation.

A USFWS-approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes from the project area, to the maximum extent possible. The USFWS-approved biologist shall be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code. To ensure that diseases are not conveyed between work sites by the USFWS-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force shall be followed at all times.

Prior to the commencement of construction activities that will occur within 100 feet of California red-legged frog habitat, a USFWS–approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the importance of the California red-legged frog and its habitat, the general measures that are being implemented to conserve the California red-legged frog as they relate to the project, and the boundaries within which the project may be accomplished.

A USFWS-approved biologist shall be present at the active work sites until such time that the initial survey for California red-legged frogs, instruction of workers, and (upland) habitat disturbance have been completed. After this time, the contractor or permittee shall designate a person to monitor on-site compliance with all minimization measures. The USFWS-approved biologist shall ensure that this individual receives appropriate training as to the identification of frogs, potential hazards to this species, inappropriate and allowable work activities, and appropriate contacts for immediate, professional biological support.

During work activities, all trash that may attract predators shall be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 20 meters (65 feet) from site riparian habitat or water bodies. The permittee shall ensure that contamination of habitat does not occur during such operations. Prior to the onset of work, the EPA shall ensure that the permittee has prepared a plan to allow a prompt and effective response to any accidental spills.

To avoid potential timing conflicts with the California red-legged frog breeding period, work activities at these sites shall be completed between May 1 and October 31.

Nighttime illumination at the treatment plant site shall meet the following requirements of the County's Estero Area Plan: "all lighting fixtures shall be shielded so that neither the lamp nor the related reflector interior surface is visible from adjacent properties. Light hoods shall be dark-colored." No night lighting shall be used unless necessary for active nighttime maintenance activities at the plant, or under emergency conditions. Lighting shall be shielded from the creeks.

Wet weather storage ponds shall be maintained as to not attract bullfrogs. This will include allowing the ponds to go dry during the summer to disrupt any breeding activity by bullfrogs. The County shall monitor wet weather storage ponds for bullfrog activity.

Response to Comment A10-8

This comment asked that Mitigation Measures 5.5-A6 and 5.5-A7 in Appendix G-1 should also be identified in Section 5.3, Drainage and Surface Water Quality, in Appendix E-1 as mitigation

measures. The required Stormwater Pollution Prevention Plan, the Sedimentation and Erosion Plan, and the Stormwater Management Plan would reduce potential water quality impacts to less than significant. The specific measures identified in Mitigation Measures 5.5-A6 and 5.5-A7 would reduce potential impacts to Southern steelhead to less than significant.

Response to Comment A10-9

This comment expresses a desire for Mitigation Measure 5.5-A6 to include the methods that will be implemented to restore the preexisting conditions of the creek. Under the Preferred Project description the pipeline crossings of Los Osos Creek and Warden Creek are to be attached to the existing bridge so that the existing contours of the creek are not disturbed. If for any reason the creek needed to be crossed by trenching, the trenches would be located in areas where the creek bank is covered with rock riprap. After trenching, the riprap would be replaced any native plants (primarily willows) would be established in and around the rock (matching existing conditions). Mitigation monitoring will be carried out by the Environmental Programs Division of the County's Department of Public Works. The Environmental Programs Division provides environmental services to the Department of Public Works, including mitigation compliance and monitoring, with CEQA oversight by the County's Environmental Coordinator.

Upon approval of the CEQA document, and issuance of all required permits, the Environmental Programs Division will assign internal responsibility for compliance with each mitigation measure to one or more members of the project team. Responsible parties include the Environmental Programs Division, the Project Manager (PM), the Resident Engineer (RE), and/or on-site monitors.

Mitigation measures are organized into project design, pre-construction, construction, and post construction tasks. Compliance with mitigation measures is documented in the project file through written reports, accompanied by project photos where necessary. Post construction monitoring of revegetation and other project components is documented by yearly reports, on a schedule typically determined by one or more of the project permits. Depending on the complexity of the post construction mitigation effort, tasks will be carried out by county staff or technical experts under contract to the County. Post construction monitoring is typically conducted for three to five years, depending on permit requirements and success criteria.

Where necessary, construction personnel will be required to attend a crew orientation meeting. The meeting will be conducted by the RE and will be used to acquaint the construction crews with the environmental sensitivities of the project site. The orientation meeting shall place an emphasis on the need for adherence to the mitigation measures and permit conditions as well as the need for cooperation and communication among all parties concerned (i.e., RE, Environmental Programs Division, Environmental Coordinator, construction personnel) in working together to solve problems and arrive at solutions in the field.

Response to Comment A10-10

This comment expresses a desire for clarification on the affects on historic architectural structures from the placement of the pumps and pump stations. Potential impacts associated could occur with the aboveground standby power buildings at the pump stations if significant historic structures are present that could be affected by the visual changes to the surrounding environment affecting their National Register of Historic Places status. No such structures have been identified.

Response to Comment A10-11

This comment expresses a desire for clarification on the potential conflicts with Section 30244 of the California Coastal Act. Project refinement through design changes has avoided all significant cultural resources. Concurrence from the SHPO on this statement would resolve the conflict with Section 30244 of the California Coastal Act. The concern in the Draft EIR was that sites had not yet been evaluated for significance. Sites that have not been previously assessed are now being avoided by direct or indirect impacts.

Response to Comment A10-12

This comment expresses a desire for clarification on the effects that treatment plant placement will have on SLO-2569. The preferred project will have the treatment plant on the Tonini Parcel and no impacts will occur to SLO-2569 on the Giacomazzi Parcel.

Response to Comment A10-13

This comment expresses a desire for additional analysis regarding the potential effects to archeological sites SLO-13 or SLO-25. The preferred project will have the treatment plant on the Tonini Parcel. As a result there will be no collection system or treatment plant on the Cemetery or Giacomazzi Parcels and no impacts would occur to either SLO-13 or SLO-25.

Response to Comment A10-14

This comment expresses a desire for clarification regarding construction and operation impacts of the sprayfields at the Tonini site. Project design for the Tonini sprayfields is refined. All four sites within the Tonini parcel will not be impacted by either the treatment plant, appurtenant facilities or the sprayfields. A 100-foot buffer around the boundaries of each of the sites was established to preclude any impacts from any wastewater treatment operations.

Response to Comment A10-15

This comment expresses a desire for clarification regarding the evaluations used in determination of SLO-1212, SLO-1795 and SLO-2007. SLO-1212 and SLO-2007 are located on the north side of Los Osos Valley Road. The current Collection System under the Preferred Project (Appendix Q.3) design has both the wastewater and treated effluent pipelines on the south side of Los Osos Valley Road and thus impacts to the sites would now be avoided. SLO-1795 along the south side of Los Osos Valley Road was destroyed during the construction of the road (Appendix H-2 Archaeological Survey Report page 32) and no significant impact to the site would occur.

Response to Comment A10-16

This comment expresses the concern that the attainment status information is in error. Table 5.9-6 in Appendix K of the Draft EIR is correct. To more fully clarify the current attainment designations for the County, Appendix K of the Draft EIR will be modified as follows:

> *Attainment Status*
>
> There are three terms generically used to describe if an air basin is exceeding or meeting federal and State standards: Attainment, nonattainment, and unclassified or unclassifiable. Air basins are assessed for each applicable standard and receive a designation for each standard based on that assessment. If an ambient air quality standard is exceeded, the air basin is designated as "nonattainment" for that standard. An air basin is designated as **"**attainment**"** for standards that are met. If there is inadequate or inconclusive data to make a definitive attainment designation for an air quality standard, the air basin is considered "unclassified." With some federal standards, only two divisions are used. Either the area is not in attainment for the standard or is classified unclassifiable/attainment. It should be noted that for State standards, designations are only made on a pollutant-by-pollutant basis, therefore, an area must achieve attainment for each averaging time for it to achieve attainment for that pollutant. The current attainment designations for the project area are shown in Table 5.9-6 below.
>
> The County has been designated as a nonattainment area for the State PM_{10} standard. The County achieved State 1-hour ozone attainment status in January 2004. SLOAPCD was one of three air districts in California in 2004 to be re-designated from nonattainment to attainment for the State 1-hour ozone standard. San Luis Obispo County was first designated nonattainment for the State 1-hour ozone standard in 1989 after adoption of the CCAA. The law required each nonattainment area to develop a plan to attain the standards expeditiously.
>
> However, there are two State standards for ozone: a 1-hour standard and an 8-hour standard. An area must attain both standards to be designated attainment. If either the 1-hour or 8-hour standard is violated, the area is nonattainment or nonattainment-transitional. The State 1-hour standard has been in place for a number of years, but in April 2005 the CARB approved a new 8-hour standard of 0.070 ppm. This longer averaging time standard was designed to protect against the more chronic health impacts of longer-term ozone exposure. The State 8-hour ozone standard became effective May 17, 2006. In the CARB's 2006 Area Designations (CARB 2006), analysis demonstrated that the County did not qualify as attainment for the State 8-hour standard, thus was re-designated to nonattainment.

Response to Comment A10-17

This comment asks that there be identification of measures that would mitigate potential NO_X & PM_{10} emissions. Section 5.9-6 of the Draft EIR contains mitigations that are designed to mitigate any potential significant impacts from NO_X and PM_{10}.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
2009-FA-0048

January 29, 2009

Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Department of Public Works
County Government Center, Room 207
San Luis Obispo, California 93408

Subject: Comments on the Draft Environmental Impact Report, County of San Luis Obispo, Los Osos Wastewater Project, SCH No. 2007121034

Dear Mr. Hutchinson:

This letter conveys the U.S. Fish and Wildlife Service's (Service) comments on the draft environmental impact report (DEIR) prepared for the proposed Los Osos Wastewater Project (LOWWP; MBA 2008). The DEIR, without appendices, was received in the Ventura Fish and Wildlife Office on December 4, 2008.

The Service's responsibilities include administering the Endangered Species Act of 1973, as amended (Act), including sections 7, 9, and 10. Section 9 of the Act prohibits the taking of any federally listed endangered or threatened species. Section 3(18) of the Act defines "take" to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Service regulations (50 CFR 17.3) further define harm to include significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harassment is defined by the Service as an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. The Act provides for civil and criminal penalties for the unlawful taking of listed species. Exemptions to the prohibitions against take may be obtained through coordination with the Service in two ways. If a project is to be funded, authorized, or carried out by a Federal agency and may affect a listed species, the Federal agency must consult with the Service, pursuant to section 7(a)(2) of the Act. If a proposed project does not involve a Federal agency but may result in take of a listed animal species, the project proponent should apply to the Service for an incidental take permit, pursuant to section 10(a)(1)(B) of the Act.

The LOWWP DEIR is intended to evaluate the potential environmental impacts associated with a wastewater collection, treatment, and disposal system for the community of Los Osos and includes an equal level of environmental analysis for four (4) preliminary project alternatives at a conceptual design level of construction. Facility operational impacts for each are also provided

to the degree that they are known. The preferred LOWWP alternative selected could be any one of the four alternatives or an alternative combination of project components. Current wastewater treatment for the community consists of individual septic systems serving each developed property, or in some cases multiple properties. The County of San Luis Obispo (County) is the lead agency for the preparation of this DEIR pursuant to the California Environmental Quality Act (CEQA).

The project is located within, and at the outskirts, of the community of Los Osos. Los Osos is an unincorporated coastal community of about 15,000 residents located in San Luis Obispo County at the south end of Morro Bay, approximately about 12 miles west of the City of San Luis Obispo. The City of Morro Bay lies about two miles to the north. The majority of Los Osos has been built on an ancient dune system formed by centuries of wind-blown beach sand deposited along the south end of Morro Bay. As a result, the terrain consists of gently rolling hills and sandy soil substrates that support twelve vegetation communities/habitat types: non-native annual grassland, coastal sage scrub, central (Lucian) coastal scrub, coast live oak woodland, central coast live oak riparian forest, central coast arroyo willow riparian woodland, vernal marsh, freshwater marsh, eucalyptus woodland, agriculture, disturbed/ruderal, and urban/disturbed.

Based primarily on an assessment of those habitat types present within the project area, the DEIR and Appendix G (Biological Resources) identifies the following federally listed species as occurring, or having the potential to occur: the endangered Morro shoulderband snail (*Helminthoglypta walkeriana*; MSS), Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*; MBKR), Indian Knob mountainbalm (*Eriodictyon altissimum*); and the threatened south/central coast steelhead (*Onchorynchus mykiss irideus*: steelhead), California red-legged frog (*Rana aurora draytonii*; CRLF), Monterey spineflower (*Chorizanthe pungens*), and Morro manzanita (*Arctostaphylos morroensis*). As the steelhead falls under the jurisdiction of the National Marine Fisheries Service (NMFS), it will not be further addressed.

We offer the following comments to aid the County in planning for the conservation of sensitive wildlife habitats and federally listed species that could occur in the project area and as a means to assist you in complying with pertinent Federal statutes. The following comments are prepared in accordance with Act and other authorities mandating Department of the Interior concern for environmental values. It is not our primary responsibility to comment on documents prepared pursuant to CEQA), so our comments on the DEIR do not constitute a full review of project impacts. Rather, they focus on the accuracy of information, the analysis of project activities relative to their potential to affect listed species and critical habitat, and regulatory implications in accordance with our mandates under the Act. Some redundancy is apparent throughout the DEIR and Appendix G so if a comment references a particular section, it should be considered relevant to the same issue anywhere else in the DEIR that issue may be discussed.

General Comments

1. Nowhere in the DEIR is the period of public review specifically defined. The only date provided is that for the close of the comment period: January 20, 2009. While it was announced that the DEIR was available on the County's website as of November 19, 2008, we do not consider this to be the commencement of our review period as we did not receive the DEIR until December 4, 2008, despite our request to be able to pick up a copy of the DEIR and Appendix G (Biological Resources) on November 21, 2009. We were told that this was not possible as the official letter necessary to accompany the documents had yet to be completed. When we received the DEIR on December 4, 2009, Appendix G was not included. As such, we had to assume the responsibility of printing out the 1,008-page document, inclusive of many over-sized color graphics. Given the complexity of the project, the size of the documents, and our role as a responsible agency under CEQA, we requested a two-week time extension for submittal of our comments on January 13, 2009. This request was denied on January 16, 2009. A11-1

2. The discussion of project impacts to biological (and other) resources through the analysis and evaluation of how each of the proposed alternative related to the six questions posed in the thresholds of significance was repetitive and difficult to navigate. It would have been much easier to understand and review had an analysis of effects been provided for each project alternative A11-2

3. While the DEIR mentions that a Federal nexus would be established by the disbursement of State Revolving Funds channeled to the County from U.S. Environmental Protection Agency (EPA) via the California State Water Board, it is our understanding that this has yet to be determined. Assuming that this would be the case, we have concerns that the all of the mitigation for impacts to federally-listed species and critical habitat are being deferred to some point in the future and that the Services would bear the majority of the responsibility as part of an interagency consultation process. During DEIR preparation, time would have been well-spent coordinating with the Services to identify avoidance and minimization measures as well as compensation to help offset impacts to listed species and critical habitat such that they could have been presented in the document and available for public review. A11-3

4. Mitigation measure 5.5-A1 states that prior to project approval, the County shall enter into formal consultation with the Service and NMFS (Services); however, the Services would consult with the Federal action agency who, in this case, may be the EPA and not the County. The measure goes on to state that "Pending the derminations made by the USFWS and NMFS in a forthcoming BO, the proposed project will be required to fulfill all mitigation obligations and conservation measures conditions in the BO regarding federally-listed species and their habitat." What is intended by this statement is not clear. A11-4

5. No matter the project alternative selected, raw wastewater collection and treated effluent conveyance pipelines would cross Los Osos and Warden Creeks and associated, adjacent A11-5

wetlands. Information in the DEIR indicates that these will likely require U.S. Army Corps of Engineers (Corps) permits. Adverse effects and take of listed species would require Corps consultation with the Services as part of their permit process; however, it is unlikely that the Services would engage in two interagency consultations for the same project. The EPA and Corps would have to determine between them which agency has the lead for any consultation based upon the level of discretionary authority each has in the project. A11-5 CONT

6. It should be noted that mitigation measures from the final EIR for the Los Osos Community Services District Wastewater Facilities Project (SCH# 9911103 certified March 1, 2001) and the Coastal Development Permit (A-3-SLO-03-113) were incorporated into the project description for biological opinion 1-8-04-F-48; however, some of these conditions remain unfulfilled. Two are of particular relevance: the 72 acres of the Broderson property not proposed for use as leach fields were never granted to an appropriate agency or conservation organization in perpetuity with deed guarantees of non-development or transfer and the $10,000 per year that was to be allocated for the long-term management and monitoring of the Broderson parcel has yet to be set aside. Both the Final EIR and the CDP contain specific conditions to this effect. These conditions should be fulfilled prior to the approval of the current project. A11-6

7. The DEIR appears to conclude that the 72 acres of land not needed for leach fields at Broderson are still available to provide mitigation opportunities to compensate for biological impacts associated with this currently proposed project. We disagree. These lands at Broderson constitute the mitigation required for take of MSS, as well as impacts to other state-listed and special status species and their habitats, that resulted from the clearing and grading of the Mid-Town site, clearing and use of staging and collection areas, and installation of pipelines that occurred in 2005 as part of the former project. Mitigation lands cannot be used to compensate for the impacts of multiple projects. A11-7

8. The discussion of the draft Los Osos Habitat Conservation Plan (LOHCP) in section 3.5.2 of Appendix G-2 should clearly state that this document was an internal agency review draft and not circulated for public review and comment. The draft was prepared by Crawford, Multari & Clark on behalf of the Los Osos Community Services District. The County was not a participant in this process. The draft was reviewed by both the California Department of Fish and Game (CDFG) and the Service. Our comments, provided on November 29, 2005, have yet to be addressed and a number of significant issues remain outstanding. Any reference to compatibility or consistency of the proposed project with the LOHCP, or conclusionary statements regarding adequacy of mitigation or any other thing, should be removed. It should also be noted that this draft plan was not prepared pursuant to the Natural Community Conservation Planning Act. A11-8

9. The discussion regarding wildlife agency consultation provided in section 4.1 of Appendix G-2 appears confused about how take/exemption of listed species would be authorized or exempted pursuant to the Act. The project does not enter into formal A11-9

consultation with the Services as this is the responsibility of the Federal action agency. Consultation is that specific process associated with section 7 of the Act and does not apply to section 10. It should be noted that there is no take prohibition for habitat, only species. Again, the discussion of what type and extent of mitigation/compensation would be assigned to the project is deferred to a later date and made the responsibility of the Services absent any prior coordination or initiation of informal consultation. In a number of locations throughout the documents, take of plant species is mentioned. Please note that while the Act and its implementing regulations prohibit the take of listed animal species, neither prohibits take of listed plant species unless removal constitutes a knowing violation of state law. Similarly, neither the Act nor its implementing regulations address take of habitat.

A11-9 CONT

10. Pre-construction surveys do not constitute mitigation. Species-specific surveys should be conducted such that the information can be provided for review in the DEIR and relevant appendices.

A11-10

Species-Specific Comments

The background information for each of the federally-listed species discussed in the DEIR (except the CRLF) needs to be expanded to include greater detail regarding the status of the species and its current distribution within the region and project area. The following species-specific comments represent those compiled after our review of the information contained in Appendix G and carried forward into the DEIR.

1. Morro Shoulderband Snail: Information in Section 5.5-4 and Table 5.5-2 should provide a more comprehensive picture regarding the presence of this species within the project area. Morro shoulderband snails are not restricted to coastal sage or coastal dune scrub habitat, having been discovered persisting in disturbed habitat and horticultural plantings. Both the Mid-Town and Broderson sites are currently occupied by MSS and, in 2005, the species (along with Chorro shoulderband snail; *Helminthoglypta morroensis*) was identified along Warden Creek near several of the proposed project alternative locations. As such, its potential for the occurrence of MSS in these areas should be included in the DEIR. It is also premature to assume that all MSS identified within the project area would be subject to relocation as the number of individuals is unknown but could be much higher than that associated with the previous project.

A11-11

2. Morro Bay Kangaroo Rat: The discussion regarding the potential presence of this critically endangered species within the project area is extremely brief and does not appear to consider the extremely imperiled nature of its status. It is possible that the Service would not be able to exempt or authorize any take of MBKR as it could trigger a jeopardy determination. Rather, we would recommend that the County work with us to develop a project that would avoid all effects on this species.

A11-12

Table 5.5-2 concludes that the MBKR has a high potential to occur, noting that suitable habitat occurs on both the Broderson property and Mid-Town site. Text in section 5.5 of Appendix G-1 states that the species "has a high potential to occur within the coastal sage scrub habitat on the Broderson property." While it is stated that no MBKR have been trapped since 1985, it does not include the caveat that there have been few, if any, protocol-level survey efforts since that time. Nowhere does the DEIR or Appendix G discuss that lands on, or surrounding, the Tonini and Branin parcels contain habitat that could be occupied by MBKR. Rather, on page 5.5-15 of the DEIR, it states that MBKR "is not likely to occur within any portions of the impact areas for all Proposed Projects 1 through 4." We disagree. Based on the existence of a historic record for MBKR for lands on or contiguous with Tonini, and the presence of habitat characteristics (ranging from high to fair quality) suitable for kangaroo rats, these areas (e.g., Tonini, Branin, Lee) have been targeted in 2008 by Dr. Francis Villablanca and the Service for spot-trapping. These efforts began in 2008 and are anticipated to continue in 2009 pending the availability of funding. To propose that, prior to construction, protocol trapping for this species would be done and all trapped specimens retained for consideration of captive breeding does not consider how significant would be the discovery of MBKR. Protocol-level trapping for MBKR is a two-year process that requires prior approval by the Service and the CDFG. It does not appear that such an effort would likely to fit with the project's projected construction timeline. More importantly, there are no facilities currently established to conduct captive breeding activities for this species and the last time this was attempted, the program was not successful. To determine the fate of any trapped individuals would require us to convene the recovery team (inclusive of CDFG) to discuss all available options.

A11-12 CONT

3. California Red-Legged Frog: The Biological Resources section of the DEIR states that the project site is not within critical habitat designated for the California red-legged frog in 2006; however, it should be noted that while the critical habitat units designated in 2006 are still valid, critical habitat was re-proposed on September 16, 2008. Any discussion of critical habitat should include the relationship of the project site to newly proposed units as well. Several of the creeks and drainages within the project area support California red-legged frogs, and it is reasonable to expect that individual California red-legged frogs make overland excursions between the drainages in this region. Under such circumstances, it is likely that California red-legged frogs disperse through the proposed project area when they move overland between aquatic habitats. Accessibility to sheltering habitat is essential for the survival of California red-legged frogs within a watershed, and can be a factor limiting population numbers and distribution. Most of these overland movements occur at night. These behaviors need to be considered when assessing the project's potential to impact this species. It is unclear how night lighting that could be associated with the project would affect CRLF and other nocturnal species.

A11-13

4. Southwestern Willow Flycatcher and Least Bell's vireo: Appendix G includes a discussion of southwestern willow flycatcher (*Empidonax traillii extimus*) ("moderate

A11-14

potential to occur"); however does not discuss the potential for least Bell's vireo (*Vireo bellii pusillus*), another riparian obligate species. This species has been expanding its range in recent years owing to the success of riparian restoration efforts and control of brown-headed cowbirds. As such, the potential for least Bell's vireo to occur within riparian habitat within the proposed project area should be included. While the listed entity of willow flycatcher is not federally regulated north of Santa Barbara County, any detection of nesting willow flycatchers in this area would be noteworthy. A11-14 CONT

5. Indian Knob Mountainbalm: Text in Appendix G states that Indian knob mountainbalm is restricted to lands within and around the community of Los Osos; however, this is not the case. The largest stands of this species occur on tarsands in the vicinity of Indian Knob and Price/Baron Canyons south of the City of San Luis Obispo. This species is actually quite rare in the Los Osos area, being known from only five occurrences that likely total less than 100 individuals. In other sections of the document, it states that Indian knob mountainbalm is found as part of coastal sage scrub habitat; however, it is a species wholly associated with chaparral. As this species is a perennial shrub detectable year-round, surveys for this species should have been conducted at the Broderson property such that the question of its presence or absence could have been included in the DEIR. A11-15

6. Morro Manzanita: This species of manzanita does not have a burl and, as such, is not a likely candidate for salvage and transplant as part of any mitigation strategy. A11-16

7. Table 5.5-1 states that the potential for the endangered marsh sandwort (*Arenaria paludicola*) to occur in the proposed project is low and that project alternatives avoid suitable habitat on the Branin property. It is likely that suitable habitat is present elsewhere within the proposed project area. The potential for the endangered Gambel's watercress (*Rorippa gambelii*) to occur within the proposed project area was not addressed at all, despite the presence of suitable habitat. We recommend that the County review its determination for marsh sandwort and address the potential for impacts to Gambel's watercress. A11-17

In summary, the DEIR and Appendix G do not, for the most part, provide a sufficient level of detail regarding the actual presence of federally listed species within each of the proposed project alternatives. The collection of this level of information is largely deferred pre-construction surveys that preclude the use of such information in the design and implementation of a project that can avoid or minimize impacts to federally-listed species and critical habitat. As such, it is impossible to determine true effect of any alternative on these species. The DEIR defers mitigation and assigns the majority of the responsibility for its development and implementation to the Services. It appears that the County believes that the next step in the process is to initiate formal consultation with the Services; however, we have not been involved in this current project process until now and were not contacted for our input during the preparation of the DEIR. Initiation of formal consultation is the responsibility of the Federal action agency; however, we caution the County not to consider that the DEIR contains sufficient information to provide the A11-18

basis for the biological assessment or to initiate formal consultation. Rather, we would encourage the County to work with the Federal action agency to request informal consultation with the Services such that we can provide technical assistance to help in the development of a project alternative that could, to the extent possible, maximize take avoidance and minimize impacts to listed species and critical habitat.

A11-18 CONT

We appreciate the opportunity to provide comments on the proposed project and look forward to working with the County in the future. If you have any questions regarding these comments, please contact Julie M. Vanderwier of my staff at (805) 644-1766, extension 222.

Sincerely,

for Roger P. Root
Assistant Field Supervisor

cc:
Deborah Hillyard, California Department of Fish and Game
Bob Stafford, California Department of Fish and Game
Jonathan Bishop, California Coastal Commission
Juanita Licata, U.S. Environmental Protection Agency
Cookie Hirn, California State Water Board
Greg Haas, District Representative for Congresswoman Lois Capps

United States Fish and Wildlife Service, Roger P. Root, February 2, 2009 (Letter A11)

Response to Comment A11-1

This comment expresses a concern regarding the time period for public review and commenting. CEQA provides for a minimum 45-day comment period for the public and commenting agencies. The EIR was made publicly available for all commentors on November 19, 2008, providing a 78-day comment period. Appendix G was included in electronic form with all hard copies of the document, and posted on the internet, in conformance with California recommendations for distribution of EIRs. Given the long history of various project efforts in Los Osos, the comment period is considered more than sufficient. Extensions of time were not granted because the County is working to meet funding deadlines which have the potential to result in substantial savings to the citizens of Los Osos.

Response to Comment A11-2

This comment states that the project impact discussions within the Draft EIR and appendices was repetitive and difficult to navigate, and that it would have been easier to understand and review had an analysis of effects been provided for each project alternative. This comment is noted.

Response to Comment A11-3

This comment states that the Federal nexus for the project, provided via funds channeled to the County from the U.S. Environmental Protection Agency (EPA), is yet to be determined. This comment raises further concern about deferred mitigation in the Draft EIR for impacts to federally-listed species and critical habitat, and as a result, the USFWS and NMFS (Services) would bear the majority of the responsibility of identifying mitigation during the consultation process. The comment further states that coordination with the Services during preparation of the Draft EIR would have been advantageous in identifying avoidance and minimization measures as well as compensations to help offset impacts to listed species and critical habitat.

The project would be funded through State Revolving Funds channeled to the County from the EPA via the California State Water Resources Control Board. As such, formal consultation with the Services would be initiated by the EPA regarding impacts to federally-listed species and critical habitat. Mitigation measures have been modified to accurately reflect the proposed consultation approach and the findings of recent surveys and ongoing efforts to address federally-listed species, including the Morro manzanita, Indian Knob mountainbalm, California red-legged frog, and Morro Bay kangaroo rat.

Mitigation Measure 5.5-A1 is provided as a standard condition for the project to ensure that formal consultation is initiated and carried out by the appropriate agencies. The measure identifies that the project would be subject to all mandatory reasonable and prudent measures that will be developed through the consultation process as part of the forthcoming Biological Opinion provided by the USFWS.

Mitigation Measure 5.5-A1 has therefore been modified to state the following:

5.5-A1 ~~The proposed project may result in take of federally listed species and their habitat. Prior to project approval, the County shall enter into formal consultation with the USFWS and NMFS. A Biological Opinion (BO) will be prepared by the USFWS and NMFS for any proposed action which may result in potential take of a listed species and its habitat. Pending the determinations made by the USFWS and NMFS in a forthcoming BO, the proposed project will be required to fulfill all mitigation obligations and conservation measures conditioned in the BO regarding federally listed species and the their habitat. This will include preconstruction survey and avoidance measures, and compensatory mitigation for loss of occupied habitat to be incorporated and implemented prior to project development.~~

~~Specific avoidance measures, preconstruction survey requirements, and mitigation measures, if required, will be provided by the USFWS through Section 7 (or possibly Section 10) consultation with regard to federally-listed species.~~

The proposed project may affect federally-listed species (Morro shoulderband snail and California red-legged frog) and as such, the EPA shall initiate formal consultation with USFWS pursuant to Section 7(a)(2) of the federal ESA. All mandatory terms and conditions, and reasonable and prudent measures pertaining to incidental take prescribed within the Biological Opinion and Nationwide Permit for the project shall be fulfilled and implemented.

These measures are considered adequate in reducing impacts to listed species and critical habitat to less than significant levels for all project alternatives considered in the analysis. Avoidance and minimization measures were developed during the preparation of the Draft EIR that reflected initial project concerns presented by the USFWS and other agencies, as well as all concerns raised during the previously approved iteration of the project and preceding iterations.

Response to Comment A11-4

This comment provides clarification on the consultation process that is proposed within Mitigation Measure 5.5-A1 and raises a question with regard the language therein. The clarification is appreciated and is incorporated in the modified measure. The commentor is directed to Response to Comment A11-3.

Response to Comment A11-5

This comment addresses concerns and provides clarification on the consultation and permitting requirements for the project. The commentor is correct that the project's collection and conveyance pipeline elements would cross Los Osos and Warden Creeks and associated wetlands, however, the crossings (as discussed in Appendix Q.3 and Q5.5 for the Preferred Project) will be provided via

suspension on the existing bridge crossings thereby avoiding any direct disturbance to waters and wetlands at those areas. The project would be impacting federally-regulated waters and wetlands in other areas however, and these impacts would require permitting with the USACE, as suggested in the comment. It is anticipated that the project will require a Nationwide Permit from the USACE. The commentor is directed to Mitigation Measure 5.5-C1 regarding permitting with the USACE.

As the federal action agency, the EPA, not the USACE, would take the lead in formally consulting with USFWS regarding adverse effects and take of federally-listed species. The commentor is directed to Response to Comment A11-3 for clarification on the consultation process for the project. If warranted, informal consultation with the USFWS could be undertaken by the State Water Resources Control Board, who may, in turn, defer informal consultation responsibilities to the County.

Response to Comment A11-6

This comment expresses that previous mitigation measures identified in the project description should be fulfilled prior to the approval of the current project. The County is aware of the situation regarding the status of past project mitigation measures and is committed to fulfilling all mitigation measures that apply to the current project efforts. Fulfilling past commitments made by other agencies in advance of approval of the current proposal is inappropriate.

Response to Comment A11-7

This comment expresses a concern regarding 72 acres of land not needed for leachfields at the Broderson site. The former project described a particular set of areas that would be impacted by the project; the agreed upon mitigation for those impacts included the elements of the Broderson site as described in this comment. Many of the impacts associated with pump stations and collection lines in the previous project never occurred, as those elements of the project were not built. To the degree that the current project results in the same or fewer impacts in the same locations as the previous project, the use of the same mitigation (Broderson) for the loss of habitat is appropriate.

Response to Comment A11-8

This comment states that the Los Osos Habitat Conservation Plan in section 3.5.2 of Appendix G-2 was an internal agency document and was not circulated for public review and comment. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment A11-9

This comment provides clarification on the wildlife agency consultation process and the approach required for the proposed project. The comment states that consultation does not apply to Section 10 of the federal ESA, and that it should be noted that there is no take prohibition for habitat, only species. The commentor is directed to Response to Comment A11-3 for clarification on the consultation process and modified Mitigation Measure 5.5-A1.

The comment goes on to state that the discussion of what type and extent of mitigation/compensation to be assigned to the project is deferred to a later date and made the responsibility of the USFWS absent of any prior coordination or initiation of informal consultation. The commentor is directed to Mitigation Measure 5.5-A15 and 5.5-A16 which identify what type and extent of mitigation/compensation is being proposed. These measures were developed based on initial project concerns presented by the wildlife agencies in addition to what had been approved by the wildlife agencies as adequate and feasible mitigation for the previously approved iteration of the project. These measures are considered adequate as they represent measures to reduce essentially the same impacts to less than significant as what had been approved for the previous iteration of the project.

The commentor goes on to reference discussions regarding potential take of habitat and potential take of listed plant species in the Draft EIR, and provides clarification on the subject of take of habitat and listed plant species and the federal ESA. It is acknowledged that the federal ESA and its implementing regulations do not prohibit take of habitat or take of federally-listed plant species, unless the removal constitutes a knowing violation of state law (i.e. the plant is listed as state endangered or threatened). No federal- or state-listed listed plant species are anticipated to be impacted by the proposed project due to their confirmed absence or unlikelihood to occur within the impact area. Recent botanical surveys have been conducted for the Morro manzanita and Indian Knob mountainbalm in December 2008 and January 2009. These species are conspicuous perennial evergreen shrubs whose positive identification can be confirmed throughout all portions of the year. No naturally occurring specimens of Morro manzanita were observed within any portions of the study area that were determined to contain suitable habitat. Although some landscape specimens may occur within the collection system element of the project, these specimens are not protected. No impacts are anticipated to occur to Morro manzanita. Similarly, no Indian Knob mountainbalm were observed within any portions of the study area that were determined to contain suitable habitat. No impacts are anticipated to occur to this species either.

There is anecdotal evidence that suggests the federally-listed Monterey spineflower may occur on the Morro Dunes Ecological Preserve east of the Broderson property, and on the Broderson property itself. Surveys and expert identification is required and ongoing during the appropriate blooming season to finally determine presence/absence and if this plant's known range should be extended south. Currently, it is assumed a sparse population of Monterey spineflower exists in the Broderson leachfield area until further investigations confirm its presence/absence. Surveys will be conducted within appropriate habitat. If the species is discovered within the impact area, seeds will be collected and later sown within suitable undeveloped portions of the Broderson that will be preserved in perpetuity. See Response to Comment A7-7 for specific language revisions to Mitigation Measure 5.5-A13.

Response to Comment A11-10

This comment states that pre-construction surveys do not constitute mitigation and that species-specific surveys should be conducted such that the information can be provided for review in the

Draft EIR and relevant appendices. Information presented in the Draft EIR and Appendix G reflect the results of a variety of surveys, many of which represent protocol-level efforts. Pre-construction measures are proposed for listed species in which protocol surveys had already been completed to confirm species presence on or in the immediate vicinity of proposed developments. The commentor is reminded that numerous surveys along all aspects of the preferred project have been conducted between the years of 1997 and 2008 to determine the presence/absence of species that have the potential to occur within the study area. These surveys are referenced within the Draft EIR and Appendix G and were important in understanding known presence/absence, abundance, and species distribution in relation to the project areas. Most recently and as part of the Final EIR effort and the forthcoming Biological Assessment, biologists from the County Department of Public Works, MBA, and Villablanca Biological Consulting (Francis Villablanca) have conducted site-specific surveys within the preferred project. These recent surveys include the following:

- California red-legged frog surveys by MBA (5/20/08 and 5/21/08): T'Shaka Toure and Karl Osmundson
- California red-legged frog surveys by County Public Works staff (1/12/08): Eric Wier and Kate Ballantyne
- Plant surveys for Morro manzanita and Indian Knob mountainbalm by County Public Works staff (12/23/08): Eric Wier, Kate Ballantyne and Kelly Sypolt
- Plant surveys for Morro manzanita and Indian Knob mountainbalm by County Public Works staff (1/12/09): Eric Wier, Kate Ballantyne, and Katie Drexhage
- Habitat Assessment for Morro shoulderband snail at Tonini Property by County Public Works staff (2/2/09): Kate Ballantyne and Eric Wier
- Habitat Assessment for Morro Bay Kangaroo Rat at Tonini Property (2/2/09): Francis Villablanca
- General biological surveys of Tonini Property, Los Osos Creek at Los Osos Valley Road, and Mid-town property (2/20/09): Kate Ballantyne, Eric Wier and Karl Osmundson (MBA)

It should be acknowledged that recent protocol-level surveys for the California red-legged frog resulted in a confirmation of this species presence, abundance, and distribution within the study area. Due to the fact that there are recent protocol-survey results for this species, the proposed pre-construction measures are considered adequate and there is no need to repeat protocol-level surveys at this time. This information is included in the Draft EIR and Appendix G, and will be further discussed within the project's Biological Assessment.

Additionally, it should be acknowledged that substantial survey efforts for the Morro shoulderband snail, Morro Bay kangaroo rat, and other sensitive species had been conducted for the previously approved iteration of the project and in preparation of the Draft Los Osos Habitat Conservation Plan. Presence/absence of the Morro shoulderband snail within the community of Los Osos, the Mid-town site, and the Broderson site is well-understood as a result of these previous surveys. To not accept the proposed pre-construction measures and require that protocol-level surveys be repeated for this

species is unreasonable given the current understanding of this species presence, abundance, and distribution throughout the proposed impact areas, and given the proposed avoidance/minimization and compensatory measures. The proposed pre-construction measures for this species are considered adequate. Greater detail regarding this and other listed species presence, abundance, and distribution is provided within the Biological Assessment prepared for the project.

Response to Comment A11-11

This comment is regarding discussions of the Morro shoulderband snail within the Draft EIR and Appendix G. The commentor is directed to the discussions for Impact 5.5-A in Appendix G for additional background information for species with the potential to be impacted by the proposed projects, including the Morro shoulderband snail. The Draft EIR and Appendix G do not claim that Morro shoulderband snails are restricted to coastal sage or coastal dune scrub habitat. The commentor is confusing reference to one of the primary constituent elements of this species critical habitat (i.e. "the presence of, or capacity to develop, native coastal dune scrub vegetation"). The discussion within Impact 5.5-A specifically states that in addition to coastal sage or coastal dune scrub habitat, the species has also been found within introduced ice plant and fig-marigold at suitable locations, as well as areas with dense veldt grass, thick leaf litter under shrub canopies, rocks, debris piles, downed wood, woody debris, and at the base of fence posts in moist pockets. It is acknowledged that this species has also been discovered persisting in disturbed habitat and horticultural plantings as the commentor suggests.

The commentor makes reference to the known presence of Morro shoulderband snail on the Mid-town and Broderson sites, in addition to an area along Warden Creek. The occupancy of snails on the Mid-town and Broderson sites is discussed within the Draft EIR and Appendix G. It is acknowledged that the species was identified in 2005 along Warden Creek near several of the proposed project alternative locations. The preferred project does not propose any developments in the vicinity of the 2005 occurrence the commentor is referencing, and any alternatives in the vicinity of the occurrence would have been abandoned to avoid impacts to the species within this expanded range. All potential impacts to the species will occur west of Los Osos Creek, and are anticipated to be limited to that which may result from the collection system (including pump stations) within the community of Los Osos, the leachfields on the Broderson site, and the pump station on the Mid-town site. The objective is to restrict Morro shoulderband snail impacts to areas identical to the previously approved iteration of the project to minimize potential issues with the mitigation strategy of acquiring the Broderson site.

The comment further states that it is premature to assume that all Morro shoulderband snail individuals identified within the project area would be subject to relocation, as the number of individuals is unknown, but could be much higher that that associated with the previously approved iteration of the project. The proposed mitigation for the Morro shoulderband snail represents a feasible and effective approach that was developed after many discussions with the USFWS for the previous project. Whether the number is higher or lower than that associated with the previously

approved iteration of the project, the proposed measures ensure that all snails will be identified and relocated by a biologist authorized by the USFWS. A revised or additional measure is not necessary to mitigate impacts to this species to a less than significant level.

Response to Comment A11-12

This comment provides clarity on how to address potential impacts to the Morro Bay kangaroo rat.

The County is committed to avoiding any take and minimizing all potential adverse effects to this critically endangered and fully protected species. No effects to Morro Bay kangaroo rat are expected because this species has not been detected to date and is not expected to occur within the proposed impacts area for the preferred project. Previous habitat assessments conducted for the Broderson and Mid-town properties concluded that the sites do not provide suitable habitat for Morro Bay kangaroo rat. However, according to recent efforts headed by Dr. Francis Villablanca in conjunction with the CDFG and USFWS, suitable habitat is noted on portions of the proposed sprayfield area on the Tonini property.

Because the project will be constructed over multiple years prior to operation, there will be adequate time to complete protocol-level surveys within all suitable habitat within the proposed sprayfield area on the Tonini property. Portions of the proposed sprayfield area have been subject to the first year of protocol surveys by Dr. Francis Villablanca which resulted in negative findings. The second year of surveys within these areas result will proceed in the spring of 2009. If the second year of surveys also results in negative findings, as expected, this species will be presumed absent from those areas. ‘

New suitable habitat areas were identified outside of the areas included in the first year of protocol surveys mentioned above, and these new areas will have to be surveyed for their first year beginning in the spring of 2009. If the species is not detected during the first year surveys in 2009, the second year of protocol surveys will be conducted in 2010. If the second year of surveys within the new suitable habitat areas also result in negative findings, this species will be presumed absent from all areas surveyed on the Tonini property.

If, at the end of the survey period, it is found that there are areas occupied by the Morro Bay kangaroo rat, the County shall avoid those areas by adjusting the sprayfield boundaries to be entirely contained within areas that are not suitable for the species.

As proposed within the modified Mitigation Measure 5.5-A5 below, the project proponent will enter into a “no take agreement” with USFWS or similar effective agreement with CDFG to avoid take and any adverse effects to the Morro Bay kangaroo rat. See Response to Comment A7-1

Response to Comment A11-13

This comment is regarding California red-legged frog, its critical habitat, and potential project effects to this species resulting from nighttime lighting. To minimize project effects on red-legged frogs, minimization measures have been proposed within the revised Mitigation Measure 5.5-A8 that will be

required prior to and during construction at Los Osos Creek, Warden Creek and tributaries to Warden Creek. Implementing these measures will substantially reduce the risk of incidental "take" of California red-legged frog. See also Response to Comments A7-16 and A10-7.

Response to Comment A11-14

This comment provides new range information for the least Bell's vireo and is requesting that the potential for occurrence of the species be included in the environmental documentation. The data that supports the expansion of the least Bell's vireo's range is not readily available. If such data exists and suggests that the species has been detected north of Santa Barbara County, then similar to the potential for occurrence determination for southwestern willow flycatcher, the least Bell's vireo would also be considered to have a moderate potential to occur within the study area. The preferred project would not impact any suitable breeding habitat for the least Bell's vireo or willow flycatcher. The only riparian habitat within the study area considered suitable for these species' breeding requirements occurs within Warden Lake (Warden Creek wetland) on the Branin property. None of the preferred project developments proposed are within 1,000 feet of this area, therefore no impacts are anticipated to occur to either of these species.

Response to Comment A11-15

This comment provides clarification on the habitat requirements and known distribution of Indian Knob mountainbalm, and raises concerns regarding surveys for this species. Site-specific surveys for this species were conducted on the Broderson property by biologists with the County Department of Public Works in December 2008 and January 2009. This species was not detected and is considered absent from the proposed impact area. The project will not result in any impacts to Indian Knob mountainbalm. The commentor is directed to Response to Comment A11-9 and modified Mitigation Measure 5.5-A13.

Response to Comment A11-16

This comment states that Morro manzanita is not a likely candidate for salvage and transplantation as part of the mitigation strategy due to the fact it lacks a burl. Site-specific surveys for this species were conducted on the Broderson property by biologists with the County Department of Public Works in December 2008 and January 2009. This species was not detected and is considered absent from the proposed impact area. The project will not result in any impacts to any naturally-occurring Morro manzanita specimens. The commentor is directed to Response to Comment A11-9 and modified Mitigation Measure 5.5-A13.

Response to Comment A11-17

This comment recommends that determinations for marsh sandwort be reconsidered, and that the potential for occurrence and potential impacts to Gambel's watercress be identified. These species are not likely to occur within the study area due to their restricted range and lack of suitable habitat. Any potential habitat that may exist within the study area for either of these species will be avoided by all proposed projects, therefore no impacts are anticipated to occur.

Response to Comment A11-18

This comment provides a description of the current legal status of the Los Osos Habitat Conservation Plan. The County has recently secured grant funds to begin moving the Habitat Conservation Plan process forward.

STATE OF CALIFORNIA

Arnold Schwarzenegger, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

January 29, 2009

Mark Hutchinson
County of San Luis Obispo, Department of Public Works
1050 Monterey, County Govt. Center, Room 207
San Luis Obispo, CA 93408

RE: SCH#2007121034 Los Osos Wastewater Project (LOWWP); San Luis Obispo County.

Dear Mr. Hutchinson:

The Native American Heritage Commission (NAHC) has reviewed the Notice of Completion (NOC) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. **USGS 7.5 minute quadrangle name, township, range and section required.**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached.**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

A12-1

Sincerely,
Katy Sanchez
Katy Sanchez
Program Analyst

CC: State Clearinghouse

Native American Contact
San Luis Obispo County
January 29, 2009

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks , CA 91362
805 492-7255
(805) 558-1154 - cell
folkes9@msn.com
Chumash
Tataviam
Fe†rnandeño

Judith Bomar Grindstaff
63161 Argyle Road
King City , CA 93930
(831) 385-3759-home
Salinan

Santa Ynez Band of Mission Indians
Vincent Armenta, Chairperson
P.O. Box 517
Santa Ynez , CA 93460
varmenta@santaynezchumash.org
(805) 688-7997
(805) 686-9578 Fax
Chumash

San Luis Obispo County Chumash Council
Chief Mark Steven Vigil
1030 Ritchie Road
Grover Beach , CA 93433
cheifmvigil@fix.net
(805) 481-2461
(805) 474-4729 - Fax
Chumash

Julie Lynn Tumamait
365 North Poli Ave
Ojai , CA 93023
jtumamait@sbcglobal.net
(805) 646-6214
Chumash

Diane Napoleone and Associates
Diane Napoleone
6997 Vista del Rincon
La Conchita , CA 93001
dnaassociates@sbcglobal.net
Chumash

Lei Lynn Odom
1339 24th Street
Oceano , CA 93445
(805) 489-5390
Chumash

Salinan Tribe of Monterey, San Luis Obispo and San Benito Counties
John W. Burch, Traditional Chairperson
8315 Morro Rd, #202
Atascadero , CA 93422
salinantribe@aol.com
805-460-9202
805 235-2730 Cell
805-460-9204
Salinan

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2007121034 Los Osos Wastewater Project (LOWWP); San Luis Obispo County.

Native American Contact
San Luis Obispo County
January 29, 2009

Santa Ynez Tribal Elders Council
Adelina Alva-Padilla, Chair Woman
P.O. Box 365
Santa Ynez , CA 93460
elders@santaynezchumash.org
(805) 688-8446
(805) 693-1768 FAX
Chumash

Salinan Nation Cultural Preservation Association
Robert Duckworth, Environmental Coordinator
Drawer 2447
Greenfield , CA 93927
dirobduck@thegrid.net
(831) 385-1882
(831) 674-5019
Salinan

Randy Guzman - Folkes
4577 Alamo Street, Unit C
Simi Valley , CA 93063
ndnrandy@hotmail.com
(805) 905-1675 - cell
Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

Salinan Nation Cultural Preservation Association
Jose Freeman, President
15200 County Road, 96B
Woodland , CA 95695
josefree@ccio1.com
(530) 662-5316
Salinan

Xolon Salinan Tribe
Donna Haro
110 Jefferson Street
Bay Point , CA 94565
(925) 709-6714
(925) 458-0341 FAX
Salinan

Coastal Band of the Chumash Nation
Janet Garcia,Chairperson
P.O. Box 4464
Santa Barbara , CA 93140
805-964-3447
Chumash

Salinan Nation Cultural Preservation Association
Doug Alger, Cultural Resources Coordinator
PO Box 56
Lockwood , CA 93932
fabbq2000@earthlink.net
(831) 262-9829 - cell
(831) 385-3450
Salinan

Mona Olivas Tucker
660 Camino Del Rey
Arroyo Grande , CA 93420
(805) 489-1052 Home
(805) 748-2121 Cell
Chumash

This list is current only as of the date of this document.

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2007121034 Los Osos Wastewater Project (LOWWP); San Luis Obispo County.

Native American Contact
San Luis Obispo County
January 29, 2009

Matthew Darian Goldman
660 Camino Del Rey
Arroyo Grande , CA 93420
(805) 550-0461 Home
Chumash

Northern Chumash Tribal Council
Fred Collins, Spokesperson
67 South Street
San Luis Obispo , CA 93401
(805) 801-0347 (Cell)
Chumash

Santa Ynez Band of Mission Indians
Sam Cohen, Tribal Administrator
P.O. Box 517
Santa Ynez , CA 93460
(805) 688-7997
(805) 686-9578 Fax
Chumash

Salinan Nation Cultural Preservation Association
Gregg Castro, Administrator
5225 Roeder Road
San Jose , CA 95111
glcastro@pacbell.net
(408) 864-4115
Salinan

Salinan-Chumash Nation
Xielolixii
3901 Q Street, Suite 31B
Bakersfield , CA 93301
xielolixii@yahoo.com
661-864-1295
408-966-8807 - cell
Salinan
Chumash

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH# 2007121034 Los Osos Wastewater Project (LOWWP); San Luis Obispo County.

Native American Heritage Commission, Katy Sanchez, February 2, 2009 (Letter A12)

Response to Comment A12-1

This comment expresses recommendations to assess and mitigate archaeological resources. Appendix H-2 and H-3 of the Draft EIR provide the requested information. A full records search was completed, an archaeological survey of the properties was completed where access was available and mitigation measures where developed. Contact with the NAHC was made in late April 2008. A letter from your office was received on May 5, 2008. The changes in the list of Native American contacts between the May 2008 and January 2009 letters was substantial. As a result, not all of the tribes on your newer list have been contacted, however, those groups with the closest ties to the project area have been involved in the development of the current project and contacts with the appropriate Native American groups will continue.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

February 3, 2009

RECEIVED

FEB 11 2009

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PUBLIC WORKS

Mark Hutchinson
San Luis Obispo County
1050 Monterey
County Government Center, Room 207
San Luis Obispo, CA 93402

Subject: Los Osos Wastewater Project
SCH#: 2007121034

A13
Page 1 of 3

Dear Mark Hutchinson:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on January 30, 2009, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

A13-1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

SCH# 2007121034
Project Title Los Osos Wastewater Project
Lead Agency San Luis Obispo County

Type EIR Draft EIR

Description The primary purpose of the LOWWP is development of infrastructure for a wastewater collection, treatment and disposal system to serve the community of Los Osos in the designated Prohibition Zone. Two primary benefits of the LOWWP are: (1) Compliance with the Waste Discharge Requirements of the RWQCB and (2) Alleviating groundwater contaminiation, primarily nitrates, which have occurred by the use of septic systems throughout the community of Los Osos.

Lead Agency Contact

Name Mark Hutchinson
Agency San Luis Obispo County
Phone (805) 781-5252 **Fax**
email
Address 1050 Monterey
County Government Center, Room 207
City San Luis Obispo **State** CA **Zip** 93402

Project Location

County San Luis Obispo
City
Region
Lat / Long 35° 18' 36.8" N / 120° 49' 31.5" W
Cross Streets Los Osos Valley Road and south Bay Blvd.
Parcel No. multiple various potential sites
Township **Range** **Section** **Base**

Proximity to:

Highways 1
Airports No
Railways No
Waterways Morro Bay Estuary
Schools
Land Use Multiple sites zoned as Public Facilities. Agriculture and Residential Single-Family

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Landuse; Noise; Public Services; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Traffic/Circulation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing

Reviewing Agencies Resources Agency; California Coastal Commission; Department of Conservation; Department of Fish and Game, Region 4; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 5; Department of Health Services; Integrated Waste Management Board; State Water Resources Control Board, Clean Water Program; Regional Water Quality Control Board, Region 3; Department of Toxic Substances Control; Native American Heritage Commission

Date Received 11/18/2008 **Start of Review** 11/18/2008 **End of Review** 01/30/2009

Note: Blanks in data fields result from insufficient information provided by lead agency.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

February 3, 2009

RECEIVED
FEB - 9 2009
COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PUBLIC WORKS

Mark Hutchinson
San Luis Obispo County
1050 Monterey
County Government Center, Room 207
San Luis Obispo, CA 93402

Subject: Los Osos Wastewater Project
SCH#: 2007121034

Dear Mark Hutchinson:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on January 30, 2009. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

A13-1
CONT

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2007121034) when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

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State Clearinghouse, February 9, 2009 (Letter A13)

Response to Comment A13-1

This comment expresses compliance with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Because there are no comments on the contents of the Draft EIR, no further response is required.

Memorandum

Clear 1.30.09 e

Date: December 9, 2008

To: State Clearinghouse

From: **DEPARTMENT OF CALIFORNIA HIGHWAY PATROL**
San Luis Obispo

File No.: EIR 2007121034

Subject: ENVIRONMENTAL DOCUMENT REVIEW AND RESPONSE
SCH #2007121034

The San Luis Obispo Area has reviewed the Environmental Impact Report for project SCH #2007121034, which is for the Los Osos Sewer Project. This project has been in the planning phase for an extended period of time. When the project plan is eventually finalized, and prior to construction commencing, the California Highway Patrol requests to be represented at meetings due to the significant impact on traffic in the area. A14-1

Any information regarding this project should be relayed to the Captain Bill Vail or Lieutenant Mark Badvocinac at 675 California Boulevard, San Luis Obispo, CA 93401. The aforementioned individuals can also be contacted at (805) 593-3300.

W. E. VAIL, Captain
Commander

Cc: Special Projects Section - 052

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Department of California Highway Patrol, December 9, 2008 (Letter A14)

Response to Comment A14-1

This comment states that when the project plan is eventually finalized, and prior to construction commencing, the California Highway Patrol requests to be represented at meetings due to the significant impact on traffic in the area. The County appreciates the Highway Patrol's interest in the project and will include their agency in construction planning meetings, consistent with standard practices. Because there are no comments on the contents of the Draft EIR, no further response is required.

December 15, 2008

Mark,

I understand why tertiary treatment was not selected as a level A alternative but I believe that perhaps not all of the benefits have been analyzed.

As I mentioned in the TAC meeting, the residents of Monarch Grove (80(??) properties) have indicated that they would like to be part of the waste water project.
If they join then they would abandon their waste water plant located on Sea Pines Golf Resort.
Gary Setting, co-owner and manager of the Resort has also indicated that they would like to join in on the project and also use the effluent to water the course.

There are several advantages to this opportunity.

1. The golf course is many acres and uses a great deal of water.
2. The golf course would serve as insurance in case of problems at Broderson.
3. Using the golf course would greatly reduce the amount of water put on Tonni spray fields (smaller footprint). P01-1
4. There are two large ponds on the golf course that would be available to help manage the effluent disposal.
5. The mitigation factor at the golf course is 0.44
6. More hookups (Monarch Grove and Sea Pines) further spreads the costs of the project.
7. It increases the viability of depositing water on the way back from the treatment plant to - the cemetery, Sunnyside school, county park (behind skate park), community center and library, and Monarch Elementary school.
8. There would be great community acceptance for bring the water back to our aquifer.

When all of these items are factored into the project, it might end up with no additional costs over the current Level A projects. It might also enable the project to be placed entirely on one or more of the sites that are closer to Los Osos which would have a big impact on the piping cost of conveying sewage and effluent.

Bill Garfinkel
Los Osos

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Public and Non- Governmental Organization Comments

Bill Garfinkle, December 15, 2008 (Letter P01)

Response to Comment P01-1

This comment expresses a concern that not all of the benefits associated with tertiary treatment have been analyzed. Currently the Monarch Grove development is not part of the project because the neighborhood is not discharging in a manner contrary to the RWQCB discharge prohibition. Therefore, these residences have not been assessed. Inclusion of Monarch Grove into the project in the future would be subject to successful negotiations between the homeowners and the wastewater agency, and would require the approval of the Coastal Commission as the neighborhood is not within the Urban Services Lines as defined in the San Luis Obispo County Local Coastal Plan. In any event, there would appear to be little advantage to adding the development to the project (along with Sea Pines) because any savings in effluent disposal area would be substantially offset by the increased flows into the system from the additional hook-ups.

Salinan Tribe

of Monterey & San Luis Obispo Counties

FAX COVER SHEET

To: S.L.O County, Dept. Public Works

@ Fax # 805-781-1229

Date: November 17, 2008

Page 1 of 2

From: John Burch, Traditional Lead

Salinan Tribe
8315 Morro Road Suite 202
Atascadero, CA 93422
(805) 460-9202
(805) 460-9204 fax

Salinan Tribe

Of Monterey and San Luis Obispo Counties

Contemporary Council Lead
Gary Pierce
805.466.6458

Traditional Council Lead
John Burch
805.235.2730

Salinan Tribal Office

November 17, 2008

To: San Luis Obispo County, Dept. Public Works
Katy Ballantyne,
Fax 805-781-1229, email pwd@co.slo.ca.us

Subject: Proposed Los Osos Sewer Project

Dear Katy,

After reviewing the new Los Osos sewer Project archaeological report created for SLO county by Far Western the Salinan Tribe is curious as to how the county intends to incorporate us into the ethnographic context of the report. Especially now that the County is aware of new data and verification of that new data which states we are the indigenous people of the Los Osos area.

Since 1998 we have been involved in this project. But due to the old MLD status in which only the Chumash most likely descendants and their families were privy to commenting on this new proposed project. Only now, after constant pressure put on the Native American Heritage Commission we are able to comment on this project as Most Likely descendants.

We believe that this new data must be included in this and all future projects. As it stands now, the current ethnographic context is obsolete and therefore inadequate. P02-1

Gary Pierce, Contemporary Lead _____

John Burch, Traditional Lead _____

Cc: Clinton Blount, Albion Environmental
Katy Sanchez, NAHC
Jim Patterson, County Supervisor Dist. 5

8315 Morro Road, #202 Atascadero CA 93422 805-460-9202 salinantribe@aol.com

Salinan Tribe of Monterey and San Luis Obispo Counties, John Burch, November 17, 2008 (Letter P02)

Response to Comment P02-1

This comment indicates that the Western Salinan Tribe has been designated as Most Likely Descendents by the Native American Heritage Commission based on new information, and as such the Salinan tribe are the indigenous people of the Los Osos area. We are aware of the information developed by members of the Salinan tribe that has been submitted to the Native American Heritage Commission, and are equally aware that the Commission has taken apparently contradictory positions on the issue. The County is currently asking the Commission to clarify their response. At the same time, all of the ethnographic information developed for this and previous projects in the area by the archaeological community supports the position that the Chumash are the indigenous people of Los Osos, not the Salinan. Regardless of the outcome of the scientific debate, it is the County's intention to include local representatives of both Chumash and Salinan peoples in the cultural resource aspects of the project to the greatest degree possible. Given the magnitude of the project, the County believes that both groups should support each other in helping the project avoid or reduce any unnecessary impacts to cultural resources in the area.

December 16, 2008

Mark

I am unable to find information relating to the total ground surface destruction associated with the two collection systems - STEP and gravity.
I believe that information would show a far greater amount of ground disturbance associated with the construction of STEP with consequent adverse effect on biology including the destruction of trees and bushes which provide animal habitat (nesting creatures, snails, etc.). A walk through the neighborhoods of Los Osos with our small lot sizes would quickly show that there are a large number of properties contain trees and bushes that would either need to be removed or would suffer major damage to their root systems. P03-1

Thank you,

Bill Garfinkel
Los Osos

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Bill Garfinkle, December 16, 2008 (Letter P03)

Response to Comment P03-1

This comment expresses a concern regarding the amount of ground disturbance associated with the construction of the STEP system. Appendix B, Project Description Data (page 3-8), indicates that each STEP installation would result in surface disturbance to 128 square feet or disturbance to a total of 610,432square feet (14.01 acres). Table 3-7 of the Draft EIR provides information on the linear feet of new pipelines associated with connection the collection system to either the new STEP tanks or directly to houses. The STEP system would have 129,000 linear feet of connections while the gravity (direct connect system) would have 140,000 linear feet of new connections.

Excavation for the STEP tanks would have a larger impact on landscaping and vegetation associated with each residence. The exact amount of disturbance to trees and bushes which provide animal habitat "nesting creatures, snails, etc." was not calculated directly, but these impacts were considered when considering the preferred project configuration using a gravity system rather than STEP.

December 2, 2008

Comments on the Los Osos Wastewater Project Draft Environmental Impact Report, November 14, 2008, by Don Bearden.

I searched high and low in the Fine Screening Report (**Att. 1)** and the Draft EIR (**Att. 2**) and can not find anywhere a 100% vacuum collection system has been analyzed for the Los Osos Wastewater Project. In fact, the DEIR Table 7-5, "Screening of Collection System Alternatives" (**Att. 2**), rules out a Vacuum System due to:

- Highest energy demand.
- Highest maintenance cost.
- Vacuum system pumps and 4,769 vacuum interface valves to maintain.

One supplier of Vacuum Systems, Tom LaHue of AIRVAC, at a town hall meeting in Los Osos on November 21, 2008, said that they can collect all of the Prohibition Zone with three Vacuum Stations and 1,590 Valve Pit packages for 4,769 connections (an average of 3 homes per Valve Pit package). Each Vacuum Station would have two vacuum pumps, two sewage pumps, and a standby power facility. The following table compares a gravity collection system to a vacuum collection system.

Gravity System (**Att. 2**)	Vacuum System
• 4,769 connections from property line to gravity main in street • 907 manholes	• 4,769 connections from property line to 1,590 valve pits in the county right-of-way then to the vacuum main in the county right-of way
• 8-18 inch pipeline, most at depths of less than 8 feet	• 4-10 inch pipeline at depths less than 6 feet
• 5 duplex pump stations • 2 triplex pump stations • 12 pocket pump stations	• 3 vacuum stations
• 7 standby power facilities for 7 of the pump stations	• 3 standby power facilities

P04-1

As can be seen above, the Vacuum System has far fewer pumps and backup power facilities; also, the pipes are smaller and can be installed in shallower trenches. AIRVAC estimates the construction costs for a Los Osos Vacuum System to be approx. 32 million dollars compared to the 83-90 million dollars for a Gravity Collection System as shown in Table 7.4 of the Fine Screening Analysis (**Att. 1**). If you add contractor overhead, profit, and 30% design contingency, there is still a potential for saving tens of millions of dollars in construction costs.

As far as high Operation and Maintenance costs are concerned, the EPA Manual on Alternate Wastewater Collection Systems, October 1991, page 20 (**Att. 3**) says: "MYTH: Vacuum sewers are operation and maintenance intensive. REALITY: In general, vacuum sewers may be less costly to construct than conventional sewers, but may be more expensive to operate and maintain. However, the magnitude of the O&M effort has been greatly overstated."

PDHengineer.com, course No. C-4029, "Vacuum Sewers – Operation and Maintenance and Management Guidelines" (**Att. 4)** documents a 2003 survey of O&M data from 22 selected projects with a total of 49 operating vacuum systems. Page 22 says: "A review of operating records of systems discussed in this chapter suggests that previously published O&M figures may no longer apply. Reasons for this are twofold. First, the previous figures were based on a very limited data on a few early systems. Second, component improvements have resulted in significantly fewer service calls and lower O&M costs."

There are many communities that have researched gravity vs. vacuum sewers. Here are three large communities that opted to install vacuum sewers:

1. Sarasota County, Florida – "Considering the relatively dense urban development in the project area, Sarasota County selected central sewer collection systems as the design alternative for all 16 communities within the Phillipi Creek Study Area, with vacuum collection chosen for approximately 80% of the areas." From an article titled "Septic vs. Sewer: A Cost Comparison for Communities in Sarasota County, Florida", by Burden, Daniel G., et al, WEFTEC 2003, pp 319-343 (**Att. 5**).

2. Albuquerque, New Mexico – "Extensive use of vacuum sewers allowed the City of Albuquerque to develop a sanitary sewer collection system that would work effectively and cost efficiently in the unincorporated portions of Bernalillo County. Over the past 12 years, the City has implemented a program that ultimately has a construction cost of $140 million. The program will ultimately serve over 8,000 residences as septic systems will all be demolished and the groundwater will be provided protection from human pollution." From an article titled "Vacuum Sewers – Engineered Solution for a Multitude of Problems" by Paulette, Robert J., WEFTEC 2006, pp3609-3620 (**Att. 6**).

3. York County, Virginia – "The vacuum sewers comprise about 25 percent of our sewer infrastructure. We have 36 people who are in operations, but only two or three are required for vacuum sewer maintenance." From an article titled "Vacuum Sewer Saves York", www.govengr.com, Government Engineering magazine, September – October 2004 (**Att. 7**).

P04-1
CONT

In summary, I think the Vacuum System alternative in the DEIR Table 7-5, Screening of Collection System Alternatives, needs a more extensive evaluation. I would fill in the vacuum system column as follows:

Baseline Criteria	Vacuum System
Level Designation	Level A
Groundwater Quality & RWQCB Waste Discharge Requirements	• Meets RWQCB requirements for elimination of pollution to groundwater. • No exfiltration due to vacuum always in the header. • Septic tank effluent that currently recharges aquifer is removed.
Water Resources	• In a vacuum sewer system, the only potential source of inflow and infiltration is the homeowner's building sewer. Old piping from house foundation to the valve pit stub out should be replaced to prevent I/I. • Septic tank effluent that currently recharges aquifer is removed.
Energy/Air Quality	• ???,??? kWhr/year • Odors – minimal due to sealed system and short retention time. • Low GHG emissions due to sealed system.
Costs	• 3 vacuum system stations to maintain. • 1,590 interface valves to maintain. • Low maintenance costs due to less equipment to maintain and fewer operators needed. • Low construction costs due to smaller piping and shallower depths.
Permitability	• Noise – Comparable to gravity during construction. Moderate operation noise from vacuum pumps, can be muffled by enclosures. • Cultural Resources - Lowest potential impact due to shallow trenching , small valve pits and fewest pump stations. • Aesthetics: Least impact. Valve pits below ground like manholes. Only 3 vacuum station buildings that can be designed like other buildings in the neighborhood.

The vacuum collection system appears to be the environmentally superior alternative.

P04-1
CONT

List of Attachments

Attachment 1 - LOWWP Viable Project Alternatives Fine Screening Analysis, August 2007, pages 1-4, 3-1, 7-8.

Attachment 2 - LOWWP Draft Environmental Impact Report, November 14, 2008, pages 3-50, 3-51, 7-23, 7-24, 7-25.

Attachment 3 - EPA Manual on Alternate Wastewater Collection Systems, October 1991, pages 17, 18, 19, 20, 93.

Attachment 4 - PDHengineer.com, course No. C-4029, "Vacuum Sewers – Operation and Maintenance and Management Guidelines", pages 1-36

Attachment 5 - "Septic vs. Sewer: A Cost Comparison for Communities in Sarasota County, Florida", by Burden, Daniel G., et al, WEFTEC 2003: Session 51 through 60, pp 319-343
and Phillippi Creek Septic Replacement Program, Quarterly Executive Summary, March 2008.

Attachment 6 - "Vacuum Sewers – Engineered Solution for a Multitude of Problems" by Paulette, Robert J., WEFTEC 2006, pp3609-3620.

Attachment 7 - "Vacuum Sewer Saves York", www.govengr.com, Government Engineering magazine, September – October 2004.

Bearden, December 2, 2008 (Letter P04)

Response to Comment P04-1

This comment states that the vacuum collection system appears to be the environmentally superior alternative. See Topical Response 5, Alternative Collection Systems.

"Steven Paige"
<shpaige@sbcglobal.net
>
12/03/2008 09:39 PM

To <LOWWP@co.slo.ca.us>

cc "alan" <alcitro@sbcglobal.net>, "Keith Swanson" <swandiego@gmail.com>, "Katie Franklin" <katielovesemily@hotmail.com>, <kwimer1@charter.net>, "Matt Clark Tile" <mctile@gmail.com>, "obama media" <media@barackobama.com>, "Piper Reilly" <getgreenlo@gmail.com>, "R Pankratz, SLOGB Admin" <slogreenbuild@yahoo.com>, "rachel" <greene4me@yahoo.com>, "Scott Peterson" <arkarts@gmail.com>, "slosg" <SLOSG@slonet.org>, "ann c" <Churadogs2@att.net>, <a.barrow@charter.net>

Subject The biggest salvage archeological dig in the history of California.

First DEIR question: Why is there no appendix on Archeological Resources? I would expect in a complete DEIR a 150 page detailed description of the Archeological resources of Los Osos and description of updated mitigation based on new technology (STEP, or STEP- STEG Sewers) approved by the Chumash Council. Didn't this happen on the last sewer project?

P05-1

With 260,000 cubic yards of potential Archeological sifting material, the Los Osos sewer trenching/archeological dig could turn into the biggest Archeological extravaganza in the history of

California with the cost passed on to homeowner's. I should know I spent a whole summer doing salvage archeology at Little Pico Creek for UCLA as a Archeo. undergrad when the State expanded Hwy. 1 in 1969. The dig was 100 by 450 feet with 36 burials and a $70,000 dollar budget. How many 'villages' will be found in the trenching here?

Leaving this extended finding out of the DEIR is the Counties continued dalliance with wasting the homeowner's money by a got-cha cost later on for 'Archeology'. The Chumash should have a say in what goes on here earily in the process. What will this dig cost Los Osos Homeowner's if the Chumash step in and sue to stop the project in the final stages of the EIR approval? Have you included that in the budget?

STEP directional drilling and certification of existing septic tanks would eliminate 2/3 the Archeological impacts of a trenched gravity sewer. It would cost a mere $600 dollars for each homeowner to certify their existing tank for primary treatment. This of course beats $10,000 dollars for a new tank and landscaping.

P05-1
CONT

Step Design-Build documents should require an on site tank testing alternative which has the added benefit of saving the homeowner from digging up his property and APCD-GHG and Energy Footprint enviormental offsets for the County. The County is ignoring expected archeological requirments in the EIR at the expense of the Los Osos homeowner's. It's the buy now pay more later plan. The Archeological considerations of STEP haven't even been brushed aside here, they are as important as any other consideration. If ignored our shared history is lost forever.

Simple math proves a point. The crossectional area of a trench 4 feet wide and 12 feet deep compared to directional boring area the size of a tea saucer. The answer is your increased odds at hitting Archeological pay dirt. You do the math.

Steve Paige
528-4738

Steve Paige, December 3, 2008 (Letter P05)

Response to Comment P05-1

This comment expresses a concern regarding the lack of an appendix on archeological resources. Appendix H-2 contains the information this comment addresses. However, this document is confidential and because of the sensitivity of the resources is only made available to qualified individuals. The concerns of the Chumash Council concerning STEP or STEP/STEG sewers was contained in the document as Project 1 consisted of a STEP/STEG system. The other three projects were all gravity systems without the STEP tanks.

It is impossible to determine how many "villages" will be found along the Los Osos Waste Water Project; however, Far Western completed preconstruction excavations for the Los Osos Project of 2003-2005. Table 2 of Appendix H-2 provides information on sites that were excavated and areas that were examined through presence/absence information. Positive results were found at only 3 sites. These sites have already had materials removed, and only one site (SLO-23) has additional materials that need to be further explored.

The Chumash have been consulted, both on this project and for the 2003-2005 efforts. While it is impossible to say that additional cultural resources will not be encountered during installation of the various parts of the project, a Memorandum of Understanding is being prepared (and has been reviewed by the Chumash) to address any issues discovered during construction.

The concept that STEP directional drilling will not impact archaeological sites is wrong. The resources could potentially be impacted under any condition, the impacts to sites through directional drilling would be unknown as opposed to controlled excavations where the scientific information would be preserved.

Tom Weinschenk
2453 Santa Clara Street
San Luis Obispo, CA
93401
thomasweinschenk@sbcglobal.net

January 10, 2009

To: Mr. Mark Hutchinson, SLO County Department of Public Works
Supervisor Adam Hill
Supervisor Jim Patterson

Re: the proposed Turri Road Sewer Solution

Dear Mr. Hutchinson, Supervisor Hill and Supervisor Patterson,

I am writing to question the County's proposed sewer project off of Turri Road. It's hard to imagine that buying up a family farm of 620 acres, converting a large portion of it into a sewer treatment plant, and spraying the environs with effluent that hails from the other side of South Bay Boulevard can be the "environmentally superior" project. It may indeed be the most politically convenient proposal, but in my opinion the environment and heritage of the farms on Turri Road will be the big losers with this proposal.

There is perhaps no more pristine stretch of country than that which can be seen from Turri Road. Avid bicyclists will tell you that Turri Road is one of their favorite locations, because it takes them back in time to a striking beauty and simplicity found seldom on SLO County roads. The negative visual impact, smell and noise of the sewage plant will be a huge disappointment to cyclists and tourists who have enjoyed the scenery for generations. But it is not just these aspects of the sewage plant that I am concerned about. If this proposal is approved, a 620 acre family farm will be lost forever, and considering the other developments on ag land in this county, this is cause for great concern. Other farms will be affected as well. The Turri family farm - which for over 100 years has farmed a variety of crops, from flowers to garbanzo beans - is directly adjacent to the proposed site. The Turri family is rightly concerned about the proposal to spray effluent which could stray onto their property. This effluent will be treated above ground, and as it evaporates and is subject to the strong winds we are all familiar with in the area, airborne particles may reach neighboring farms, potentially affecting the air quality and food these farms grow. The Turri family, as well as others nearby, have maintained pristine ag land on their property for generations. We, as citizens of SLO County, should be grateful to them for how they have preserved the land. Instead, this proposal would change their way of life forever. P06-1

Clearly, the number of people directly affected by this proposal is less than other proposals. There is, however, an ethical question here. Why should family farms and residents of Turri Road be responsible for solving a problem which they had nothing to do with? Should the solution not lie within the community where the problem first arose?

Unfortunately, the pristine countryside of Turri Road does not have much political clout. It is, however, one of the most valuable resources we have in our County, and I hope you will do whatever you can to preserve it.

P06-1
CONT

Sincerely,

Tom Weinschenk,
SLO County resident

Tom Weinschenk, January 10, 2009 (Letter P06)

Response to Comment P06-1

This comment states that the pristine countryside of Turri Road does not have much political clout; however, it is one of the most valuable resources in the County. In addition, this comment stated that treated effluent would be subject to strong winds as it is sprayed onto Tonini and migrate to the food crops on the east side of Turri Road. As identified in the Preferred Project as discussed in Appendix Q, the spray heads will be located approximately 30 feet from Turri Road on the Tonini parcel and the spray will be directed away from Turri Road. In addition, the Preferred Project will only include spraying for evapotranspiration which is at a lower rate than the previously envisioned percolation areas. Furthermore, the buffer and the width of Turri Road would act as a buffer for wind blown irrigation that is sprayed for evapotranspiration. These features would reduce potential impacts on food crops on the east side of Turri Road from the proposed sprayfield operations.

Comments by Mark Low/ECOfluid

DEIR Los Osos

County of San Luis Obispo

Los Osos Wastewater Project

Attention: Mark Hutchinson and all other interested parties;

ECOfluid's www.ECOfluid.com Treatment Technology information was provided to San Luis Obispo County, your consulting engineer "Carollo Engineers" and you before and/or during the EIR Scoping period yet that information was not included as part of the county's evaluation and current EIR Process/Report. As part of my continuing effort to make known ECOfluid's USBF (MBR) energy conservation and capital cost saving wastewater treatment technology, I have attached a series of exhibits in support of the county's study that would be of interest to those responsible for researching solutions for vetting and selection in the Los Osos/Baywood Park Septic Tank Discharge Elimination Project. I will keep my comments as sharp and on point as is possible, while extending the invitation to you and/or your consulting engineer(s) to meet with our engineers to discuss more fully the facts, features and advantages of employing ECOfluid's USBF (with or without ultra filtration membrane) Treatment Technology. P07-1

In response to the DEIR, I have the following comments regarding our technology which seems to have been missed "during the process":

First:

Electric Power Consumption for ECOfluid's USBF Treatment Biology only

Is 450,000 kWh/year for a 1.2 MGD Facility.

Electric Power Consumption for all equipment including headworks, biological treatment, external membrane filtration, UV Disinfection (tertiary treatment)

Is 900,000 kWh/year for a 1.2MGD ECOfluid USBF MBR Facility.

When these figures are added to those on Page 454 of the DEIR in order that a true "side by side" comparison of technology include ECOfluid's USBF, there is little doubt, if any, that energy is conserved in the daily operation of and for the life of the Facility.

The energy usage information regarding the ECOfluid USBF (MBR) Treatment Technology is a "significant environmental issue" as described in CEQA Statues:

http://ceres.ca.gov/topic/env_law/ceqa/guidelines/art7.html

P07-1 CONT

15088. Evaluation of and Response to Comments

(c) The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the Lead Agency's position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice.

SECOND:

Capital Cost for an ECOfluid USBF(MBR) equipped facility is significantly less at $6.80 (without a membrane) and $7.40 a gallon capital costs (with membrane) tertiary treatment compared to the $20.84 a gallon capital cost for the secondary level treatment oxidation ditch out lined in the San Luis Obispo County's current RFQ.

ECOfluid's "pre-engineered" designs conserve energy and resources because all biological processes and secondary clarifications are accomplished in a single tank. It takes less time, money and energy to design, bid, build, operate and maintain this very efficient and effective treatment technology. A significantly less amount of land, time, energy and money are needed to construct and operate an ECOfluid USBF (MBR) equipped facility which results in a lower environmental and economic footprint, overall.

P07-2

ECOfluid's USBF (MBR) technology significantly reduced energy usage, operational and construction costs as stated here and in the accompanying documentation, will more than cover any expense of reevaluating the county's consulting engineer's current conclusions, when compared with every other treatment technologies outlined on page 454 in the current DEIR.

Third:

Certain collection conveyance systems appear to have been overlooked and not included in the DEIR. Wikipedia has a descent description/discussion that could be evaluated side by side, the gravity sewerage selection that seems to have risen to the top of the county's study process. The DEIR provides little, if any, significant discussion regarding leak detection and certainly no standards were discussed for measuring "leakage" of raw sewage from 40+ miles of under street collection and no discussion at all regarding the approximately same distance of on-site conveyance to the under street "gravity" conveyance.

It is significant that un-welded sewer pipes are permitted to leak 499 gallons per day from a "test section" while being constructed according to the San Luis Obispo Public Improvement Standard while a vacuum or grinder pump conveyance system won't operate properly if either leaks at all. The actual leakage from a gravity sewer buried up to 25 feet deep may never be detected, after it has been buried, until a catastrophic failure or sinkhole occurs while a vacuum or grinder pump small diameter collection system is installed using environmentally sound directional boring technology at a fraction of the cost in a fraction of the time. P07-3

http://en.wikipedia.org/wiki/Grinder_pump
http://en.wikipedia.org/wiki/Sanitary_sewer

4. The allowable leakage in the test section shall not exceed 500 gallons per mile, per 24 hours, per inch diameter of pipe tested at the five foot test head.

http://www.slocounty.ca.gov/AssetFactory.aspx?did=9362

Respectfully submitted,

Mark Low
Mark@nowastewater.com
(602) 740-7975 Voice
(480) 464-0405 Facsimile

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ECOfluid, Mark Low, January 14, 2009 (Letter P07)

Response to Comment P07-1

The comment describes an alternative wastewater treatment technology; while the comment and attachments provide a good overview of the technology, the various statements regarding the superior nature of the system are necessarily generic and not fully supported. While the technology appears to be a good fit in some installations, as described in the literature, there is no information specific to the Los Osos application. However, the project selection process through the Design/Build Request for Qualifications mentioned in the comment was specifically designed to elicit alternative technology proposals. Costs provided in the comment, although incomplete as to the details of what is and is not included, are consistent with the cost ranges referenced to "page 454" (page 7-47 table 7-7).

Response to Comment P07-2

This comment provides cost estimates for various versions of the USBF technology. These cost estimates lack sufficient detail to determine what elements are or are not included. The current County cost estimates are fully described in the Fine Screening Report (August 2007) and provide the detail needed for reviewers to determine each element, and the included factors, in the estimate. For instance, cost estimates in all County documents include all elements of an alternative: land costs, permitting, engineering, appurtenant structures (maintenance and administration buildings) etc. This comment provides no supportive evidence for the estimates. The range of treatment alternatives considered for inclusion in the EIR is based on life-cycle costs, long-term operational issues, ability to consistently meet discharge objectives, etc. and not simply on initial capital costs.

Response to Comment P07-3

This comment expresses a concern regarding the evaluation of alternative conveyance collection systems. See Topical Response 5, Alternative Collection Systems.

Terra Foundation
217 Westmont Avenue
San Luis Obispo, CA 93405

Mark Hutchinson
Environmental Programs Manager
SLO County Department of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

Draft EIR Comments for the
Los Osos Wastewater Treatment Project
Submitted January 19, 2009

The Terra Foundation is a 501 c (3) non-profit corporation in the State of California established in 1990. Its mission is to promote, educate and create sustainable approaches to living within our local environment and economy.

We recognize the substantial effort that went into the creation of the LOWWP DEIR but find further evaluation necessary for a fair and balanced review of STEP/STEG collection system technology and recommend a full analysis of the *Statement of Key Environmental Issues for the Collection System of the Los Osos Wastewater Treatment Project (KEIS)* submitted to the SLO County Board of Supervisors September 9, 2008 by the San Luis Bay Chapter of the Surfrider Foundation, SLO Green Build, Santa Lucia Chapter of the Sierra Club, Terra Foundation, Los Osos Sustainability Group and Northern Chumash Tribal Council (see *LOWWP DEIR* Appendices H-1, I-1, M-1, and N-1). We ask for further analysis of the *KEIS* in relation to:

- Infiltration and Inflow (I/I) – as documented in the *KEIS*, STEP/STEG collection technology greatly reduces I/I. The LOWWP DEIR conclusion that I/I within a gravity system does not rise to the level of potential significant environmental impacts is a fatally flawed conclusion. The Director of the Morro Bay National Estuary Program noted that I/I was a key factor contributing to the 20,000 gallon raw sewage spill into the Morro Bay Estuary, a Marine Protected Area (MPA), from the California Men's Colony's brand new gravity wastewater treatment plant. Additionally, the Director of the Central Coast Low Impact Development Center has noted that lower I/I yields higher concentration of the waste stream and therefore allows for higher quality treatment. P08-1
- STEP/STEG septic tanks settle out greases and therefore prevent grease clogs from occurring in the collection pipes. This type of clog within a gravity system recently caused a 1,000 gallons raw sewage spill in Pismo Beach with the raw sewage flowing out of a sewer manhole January 7, 2009. STEP/STEG is a small-pipe sealed system and significantly reduces exfiltration and collection pipe spills thus reducing contamination of the land and State Marine Reserve.
- A STEP/STEG collection system does not require any pump and pocket pump stations. The gravity collection system does. It is being designed with 8 pocket pump and 3 pump stations cradling the edge of the Marine Protected Area State Marine Reserve (This is only a partial list of the required pump stations for gravity. See LOWWP DEIR Exhibits 3-3, 3-4, 3-7, 3-8, 3-9.) These gravity pump stations are not being designed with back-up power but will be built with reserve capacity. How can a FEIR or gravity collection system design team determine what the necessary reserve capacity would be on a Marine Protected Area State Marine Reserve? The CMC spill occurred from a power outage followed by the failure of a P08-2

back-up generator. Placing 11 pump stations at the edge of the bay places the bay at risk and Los Osos residents at great risk of fines. Additionally, analysis of the aesthetic impacts must be determined because the future of Los Osos as a thriving community will most likely be based on eco-tourism as for the City of Morro Bay. P08-2 CONT

The California Department of Fish and Game stated April 13, 2007 in the *Master Plan for Marine Protected Areas* that "Take is not limited to fishing activities…. The high level of protection created by a SMR is based on the assumption that no other appreciable level of take or alteration of the ecosystem is allowed (e.g., sewage discharge…)." (p. 52.) The FEIR for the LOWWP must provide a full analysis of potential take from, for instance, installing gravity system pump stations at the edge of the SMR, especially in relation to construction and construction demand for dewatering for gravity system structures proposed at the edge of the bay. P08-3

Sea rise and climate change need to be further addressed especially in relation to the gravity pump stations. The U.S. Geological Survey's new report predicts much greater sea level rise from global warming stating the rise could be as much as 4 feet by 2100. The LOWWP FEIR must analyze the LOWWP environmental impacts within this context. P08-4

The Terra Foundation promotes the practices of Low Impact Development and believes the LOWWP DEIR has not adequately analyzed the use of LIDs within the project's design. For instance, a Wallace Group Senior Environmental Resources Engineer noted the showcase potential for the LOWWP in relation to LIDs where treated wastewater could be returned to Los Osos for recharging the basin by way of greening the streets. Examples of this type of design can be found in *Rainwater Harvesting for Drylands, Volume 1*, by Brad Lancaster (Fig. I.1B), or, by reviewing the LID strategies the Central Coast Low Impact Development Center is establishing. The Terra Foundation does not support the use of spray fields, and, even more so, spray fields outside of the Los Osos water basin (Tonini site). P08-5

The Terra Foundation does not believe the Broderson site for disposal-recharge has been adequately evaluated. For instance, it has not been tested with secondary or tertiary treated effluent to establish if the site can ever receive 400,000 gallons/day of treated effluent. Furthermore, its review *must* go through the Department of Health. Broderson is not a disposal site; it is a recharge site with potential health risks to the aquifer, the town's water supply, and cannot bypass review by the Department of Health for purposes of safety. P08-6

As the Regional Water Quality Control Board has observed, the health of water quality requires a "paradigm shift" and we encourage the FEIR to "think outside the box" and to formulate an environmentally superior project that utilizes LIDs. Gravity technology is far from being a Low Impact Development Technology; STEP/STEG is one. The Terra Foundation does not support a gravity project with Tonini as the treatment site and Broderson for recharge as environmentally superior and recommends further evaluation of alternatives for the FEIR. P08-7

Sincerely,

Linda Seeley

Linda Seeley, President
Terra Foundation
805-544-8112

Terra Foundation, Linda Seeley, January 19, 2009 (Letter P08)

Response to Comment P08-1

This comment expresses a desire for further analysis regarding infiltration and inflow. The purpose of an EIR is to evaluate the potential environmental impacts of the proposed project. While we appreciate the effort that went into the preparation of the KEIS, the EIR focuses on the project at hand and is not intended or required to provide a detailed analysis of other documents. It should be noted that the KEIS was produced before the EIR was released for public review, and as a result suffers from both a lack of information on which to base its conclusions as well as misunderstanding and misuse of information provided in the Fine Screening Report and the twelve technical memorandums, some of which were also finaled after the KEIS was produced.

Response to Comment P08-2

This comment expresses a desire for further analysis regarding use of pump and pocket pump stations for the STEP/.STEG collection system. See Topical Response 10, Infiltration, Inflow, and Exfiltration. It should also be noted that the referenced spill at CMC was reportedly the result of power failures at the treatment plant, not from any overflows in the collection system. For Los Osos, the treatment plant will be designed to manage and treat all flows received from the collection system. As described in the Draft EIR, none of the alternatives considered for Los Osos include a discharge of treated effluent to surface waters, as is the case at the CMC plant. Therefore, even if the new treatment plant suffered a similar double failure, overflows to the Bay would not result. Regarding infiltration, inflow and the concentration of the waste stream, inflows would be expected to reduce the concentration of contaminants in the wastewater for the most part not increase those concentrations.

Response to Comment P08-3

The comment expresses concern regarding the protection of the State Marine Reserve and the installation and operation of the pump stations along Morro Bay and the potential for sewage discharge. The LOWWP is designed to reduce (if not eliminate) discharge into Morro Bay that occurs under existing conditions. The exact quote in the Master Plan (January 2008) states that "State Marine Reserves provide the greatest protection to species and to ecosystems by allowing no take of any kind (with the exception of scientific take for research, restoration, or monitoring). The high level of protection created by an SMR is based on the assumption that no other appreciable level of take or alternation of the ecosystem is allowed (e.g., sewage discharge, seawater pumping, kelp harvest)." The LOWWP does not allow for sewage discharge into Morro Bay. The installation of the pumps would not result in discharge and the amount of groundwater pumping for installation would be minimal. Response to Comment A1-4 covers issues of accidental spills.

Response to Comment P08-4

This comment expresses the concern that climate change impacts related to sea level increases needs to be further addressed. Sea level rise could be of potential concern with relation to Inflow/Infiltration (I/I). Section 3.3.5 of the Draft EIR says that for I/I to occur in STEP/STEG systems, defects in the overall collection system must be present that permit entry of water into the

collection system. The Draft EIR says that for STEP/STEG, the most likely location for I/I to enter the collection system is through the laterals from the house to the STEP/STEG tanks. The established regular inspections would reveal maintenance problems, or the telemetry system alarm signals that there is a collection system malfunction, the maintenance crews would need to quickly respond and repair any collection system malfunction.

For gravity systems, inflow is typically associated with groundwater entering the system where the sewer lines are located below the seasonal groundwater table and infiltration is typically associated with rainfall events where rainwater enters the collection system directly during a rainfall event. The Draft EIR contains maintenance designs that include a video inspection of the collection system conducted every 2 to 5 years or when a leak is suspected. The maintenance staff or a contractor would repair any sources of leaks such as cracks, separated joints, illegal storm drainage connections, or intruding roots.

Response to Comment P08-5

This comment expresses a recommendation to include Low Impact Developments (LID) within the project's design. The proposed project includes the development of infrastructure for a wastewater collection, treatment and disposal system. See Topical Response 11, Construction and Post-Construction Stormwater, on requirements for LID throughout the project features.

Response to Comment P08-6

This comment expresses concerns about the evaluation of the Broderson site for leachfield disposal. See Topical Response 8, The Broderson Leachfield. The California Department of Public Health has been consulted numerous times regarding the proposed use of Broderson. As noted in their letter (see comment letter A2-1) "we would recommend to the RWQCB that the Broderson site be considered a disposal project."

Response to Comment P08-7

This comment expresses a recommendation that the Final EIR formulate an environmentally superior project that utilizes Low Impact Developments. Because there are no comments on the contents of the Draft EIR, no further response is required.

T. Dodd
300 Mar Vista Dr
Los Osos CA 93402

January 20, 2009

Mark Hutchinson
Environmental Program Manager
San Luis Obispo County Dept. of Public Works
San Luis Obispo, CA 93408

RE: DEIR on LOWWP

De ja vu, all over again!! I thought we got rid of one horrific sewer plant plan that was shoved down to our throat by the three infamous (mis)directors but now another one that is equally horrific plans is coming our way by courtesy of SLO County Government

I never had much of faith in SLO County Government which has a long history of neglect and terrible mismanagement with Los Osos but this will be at the top along with ignoring the salt water intrusion to our water basin for so long.

What you came up as proposed plan (seems to be already decided by who knows who) is nothing short of incompetence by the Public Works Dept. Sorry to be blunt but any idiots can come up with such a outdated dinosaur project that is ignoring the urgent current environmental and resources concerns that sweeping our state, nation and whole world at large except, it seems, SLO County Dept. of Public Works. On top of that you've spent 5, 6 million dollars to come up with this nonsense. You, the government, should and must be acutely aware of what's happening with our environment and resources concerns and it's imperative that you do it right the first time!! P09-1

I really wonder if we, the people of Los Osos who seeks the best solution with least amount of cost (which means keep it as simple as possible) and least damaging to our environment (which means keep it as simple as possible), have any hope being led by backwards thinking people like starting with Noel King, who hand-picked TAC members (that was a total joke except just a few people, in my opinion) that were mostly biased toward in favor of the "any-sewer-at-anyplace-at-any-cost-as-quickly-as-possible" notion, who also publicly declared that nothing but gravity system is considered, Mr. Ogren and Mr. Gibson (unfortunately, they both seem to be following the same path as former director) ? Sad to say but I'm not optimistic. But hopefully some courageous people will do something about it, again.

sincerely,

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T. Dodd, January 27, 2009 (Letter P09)

Response to Comment P09-1

This comment states that the proposed project is being directed down the same path as the previously proposed water treatment facility. The current project proposes a different treatment plant location and a different effluent disposal process (see Appendix Q). Because there are no comments on the contents of the Draft EIR, no further response is required.

David & Cher Dubbink

1147 Ninth Street
Los Osos, CA 93402

January 26, 2009

Mark Hutchinson
Environmental Programs Manager
Department of Public Works
San Luis Obispo County

Comments on the Draft EIR for the Los Osos Wastewater Project

Dear Mr. Hutchinson:

Thank you for the opportunity to comment on the draft EIR. The community's lack of a proper wastewater disposal system has been a significant and longstanding environmental problem. The project needs to move forward. However, it is also important to insure that project construction and operations have minimal environmental and social impacts on the community. The DEIR proposals and mitigations need to be better focused in responding to some of the special issues present in Los Osos. There are also some errors in need of correction.

My review of the project is concentrated on several topics that are of special interest to justice. As a homeowner and owner of rental property in Los Osos I am directly impacted by whatever form of wastewater treatment is adopted. I might also note that I have worked in the field of environmental planning for a number of years and, as a professor at Cal Poly, have taught courses dealing with many of the issues related to environmental protection. I understand the range of technologies that are applied and the legal framework used in impact analysis. I feel it appropriate to make a careful review of the wastewater project and its many impacts on the community and share my insights.

I'm a specialist in community noise issues and will start with that.

Noise- The Acoustic Setting

The initial step in any study of noise impacts is to describe the acoustic setting. While the DEIR provides some noise readings there is little in the way of descriptive interpretation. It might have noted that:

Los Osos is a quiet place without major roadways or industry. The 1898 town plan featured a grid of 25 by 125 foot lots. This affects today's acoustic environment in several ways. Some parcels have been combined to make larger building sites but there are many homes on the original narrow lots. Neighbors are close so putting distance between noise sources and listeners isn't an option in many cases. The street layout didn't consider the undulating dune topography and through travel isn't possible on many of the streets. Some have never been paved. While the resulting pattern bewilders newcomers, it

P10-1

effectively slows traffic and reduces community noise levels. The irregular shoreline of the Morro Bay estuary contributes another layer of geographic complexity. Environmentally sensitive habitat areas and protected wetland areas are woven into the community fabric. Los Osos is also a destination for coastal visitors who appreciate its unhurried character and its attractive natural setting.

P10-1 CONT

In summary, the town is unusual in several ways. Los Osos is a *quiet environment* but much of the *housing is densely packed*. Development is interspersed with *natural resource areas* of state and national significance.

As an analytic document, the DEIR's acoustic study has multiple problems. I is based on a model that is appropriate for evaluating a shopping center but is less relevant to designs for a wastewater treatment system. Most of its analytic energy is expended in describing the impacts of noise from traffic generated by the project alternatives. Unsurprisingly, the choice of a wastewater collection and treatment system is shown to have a less than significant impact on traffic and traffic noise. The roadway noise prediction technology used is outdated and math doesn't take proper account of the volume of truck traffic but a proper redo of the analysis wouldn't change its unsurprising conclusion. It is bothersome that the narrative includes an erroneous description of Caltrans policy concerning thresholds of significance but an accurate citation this wouldn't change the conclusion either. Noise from project traffic isn't much of an issue but there are other sources that are significant. The study gives no attention given to dimensioning the two major sources of noise for the STEP system described in Chapter 7 of the DEIR . These are said to be tank alarms and the pumping of septage (page 7-24) . The study also misses one of the more significant potential impacts altogether – the impact of project noise on the coastal wildlife. Most importantly, it fails to provide noise limits and enforceable mitigations for management of noise impacts.

P10-2

Rather than reciting the report's shortfalls and hoping for some positive response from the DEIR consultant it is better to just describe the acoustic impacts of the project and say what should be done to minimize noise impacts on residents and the natural environment[1].

Potential Noise Problems

After defining the acoustic setting and issues, the next step is to identify the project features with a potential for producing noise problems. We'd look for activities that produce lots of noise or for things that might be bothersome to people or to wildlife.

A partial list of noise sources includes the following:

- Construction activity, particularly the use of a pile driver associated with the gravity collection system. Presumably, this would have to do with construction of pumping stations next to the Bay.
- There are those OSHA backup beepers attached to heavy equipment that would be sounded during construction. They would also be part of the future project

[1] Comments on the problems with the DEIR noise analysis have been provided separately.

operations scenario, particularly in association with the regular pumping of STEP tanks.

- Generators are used during construction. They are also part of the operation plan for the gravity collection system; providing standby power for pump stations during power outages. The previous plans for the gravity collection system included ten pocket pumps without standby power. During a power outage, a truck-mounted generator would circulate among the pump stations providing power to run the pumps long enough to empty each station's reservoir. This isn't mentioned in the DEIR project description but is likely to be part of the package.
- Chapter 7 says that, with the STEP system, there will be noise from alarms mounted at each of the 4769 tanks and noise from intermittent septage pumping. Another section of the DEIR reports that failure notifications will be managed through "telemetry" (page 3-47). There is nothing about either the alarms or the septage pumping in the project noise analysis or proposed mitigations and these topics deserve attention.
- The noise study says that the STEP system also includes 630 "air vacuum valves" that produce intermittent air releases (The project description in Appendix __ puts the number at 1000)

Addressing the Issues

The following paragraphs are organized in the same order as the listing of potential noise sources listed above. The DEIR analysis does present information about noise (and vibration) from pile driving and stationary generators but not other sources such as septage pumping or air valves. It would have been better to have the noise production information for all sources but this shortfall doesn't make it impossible to develop useful and workable impact mitigations. The strategy is to present the mitigations in the form of performance standards.

Construction Vibration and Noise

There is one issue that looms above all others in considering vibration and noise impacts is noise from pile driving during construction. The project description says that pile drivers could be used in constructing the footings for pump stations. Half of the 18 pump stations are adjacent to the bay. The EIR's acoustic study identifies potential problems related to ground vibrartion but it doesn't provide authentic mitigations. P10-3

Vibration is measured by several metrics but the one common to the most relevant reports is "PPV" or peak particle velocity measured in inches per second. The shaking is dampened by distance from the source and different types of soils behave differently. Water-saturated, sandy soils dampen the vibration energy less than average soils.

The noise study projects that a pile driver will produce a PPV of .644 measured 25 feet from the source. It also states that the threshold of significance for vibration is any activity producing a PPV level above .2. The DEIR doesn't report where this threshold comes from but the source is probably publication by the Federal Transit Administration (FTA) referenced in other places in the DEIR . The FTA report indicates that there is ***a likelihood of damage to non-engineered timber and masonry buildings when vibration***

velocity exceeds the PPV .2 level. The FTA report goes on and gives the PPV levels when other types of buildings reach a vibration damage threshold. For engineered concrete and masonry buildings (no plaster) the level is .3. For reinforced concrete, steel or timber buildings (no plaster) the PPV level is .5. In other words, the DEIR's forecast vibration level for pile driver operations is, at 25 feet, in excess of the damage criteria for every buildings of every type of construction, old and new.

Caltrans developed its own threshold criteria for evaluating vibration[2]. The damage criteria are stated for newer and older structures and for residences. For "modern industrial/ commercial buildings the PPV threshold level is .5 which is the same as in the federal report. For newer residences the level is also .5. For older homes the PPV threshold is .3. For historic and old buildings the level is .25, a bit higher than the threshold proposed in the FTA study (and the DEIR). Still, in the case of all building types, the pile driving would damage Los Osos structures.

The Caltrans report includes a formula for calculating the spread of vibrations. Putting the DEIR data into the Caltrans formula we can calculate the distance from the source to the PPV .2 level. The diameter of the circles of likely structural damage is 140 feet across. Figure 2 shows circles of this size superimposed on an aerial photo of a portion of the impacted area.

P10-3
CONT

In addition to assessing the likelihood of structural damage, the Caltrans study includes a table describing human annoyance potential. The threshold for perceptible vibration is .01. Vibration is "strongly perceptible" at PPV .1. It is rated as "severe" at .4. By the Caltrans standard the vibration levels experienced will be severe at 25 feet. The Figure 1 diagram does not show the larger diameter rings that would define the PPV .1 level. The region where the impacts would be strongly perceptible is calculated to be double the diameter of the circles shown in the figure.

Figure 1: Regions of Structural Damage

The noise levels associated with pile driving are significant too. An "average" pile driver produces sound at a 101 dB level heard at a distance of 50 feet. This is greater than the takeoff sound generated by a contemporary commercial jet heard at an elevation of 1000 feet. A person shouting from 3 feet away produces sound at around the 85 dB level. The limit set in the county's noise ordinance is 70 dB for stationary noise sources. The level exceeds the OSHA workplace standard of 90 dB.

[2] *Transportation- and Construction-Induced Vibration Guidance Manual*, Caltrans, June 2004.

In summary, vibration from pile driving is likely to damage buildings in Los Osos. The sound levels are well in excess of county standards and the standards of other governmental agencies.

P10-3 CONT

The noise study in the DEIR reports no information of how the vibration or the noise levels might impact the *natural environment* but this is certainly a topic of major concern. In other projects, such as the renovations to the Morro Bay State Park campground across the bay, there have been time-of-year restrictions on activities that might disturb nesting birds. The biology section of the DEIR does not directly address vibration or noise issues but proposes that, prior to construction, biologists survey the project area for nesting birds and raptors. Construction is to be set back from active bird nests by 250 feet. The setback for raptor nests is 500 feet. These distances might be appropriate but they should be substantiated by reference to the considerable literature on this topic and by references the mitigations associated with similar scale projects along the California coastline.

P10-4

Mitigations

Pile Driving

The DEIR's response to the high potential for damage from pile driving is to pass responsibility for the resulting structural damage to the contractor. They are directed to survey the neighborhood and work with homeowners to document before and after conditions. The contractor is to pay for necessary reconstruction. Obviously, the assumption of such open-ended liability by contractors could increase the bid price of construction. A far better option would be to employ less potentially destructive construction methodologies.

The Caltrans report lists seven alternatives to conventional pile driving. The DEIR proposes use of a pile driver equipped with a "damper" and this is one of the seven options suggested by Caltrans. The report says dampers can reduce impacts by half - but even with such a reduction the numbers indicate that structural damage remains likely. The mitigation doesn't reduce the problem to less than significant levels.

P10-5

AVOIDANCE is the fundamental mitigation strategy for activities with environmental impacts that exceed acceptable thresholds. Such strategies are certainly justified for a community of closely spaced, older homes. Also, the proposed pile driving sites are spaced along at the shore of a natural area of recognized value which reinforces the argument for avoidance.

Other Construction Noise

When the DEIR discusses the noise from pile drivers or the noise produced by other construction equipment everything is treated in terms of averages. This obscures the variation that exists between equipment from different manufacturers or of equipment of differing ages. The DEIR study relies on tables taken from the FHWA's construction noise model. The performance data used in the model is, in turn, taken from Boston's "Big Dig" project where the noise data formed the centerpiece of a program to minimize disruption from construction noise.

P10-6

In the Boston noise regulation program the "averages" served as the *upper limits* for the permitted noise from various types of equipment. Contractors were required to produce basic noise plans identifying the equipment that would be used, when it would be used, its location and steps that would be taken to limit noise output. There also was a monitoring program to insure that conditions were being respected (inspectors could stop work if they were not). Information about all of this is available and could be easily adapted to the Los Osos wastewater project. The construction noise management plan for the project is found at:

http://www.nonoise.org/resource/construc/bigdig.htm

It might be noted that the county of Ventura has developed threshold treatments for construction noise that follow this pattern. A PDF version of this document is appended to the email version of this letter.

The DEIR sidesteps the problem of construction noise impacts by invoking the County's noise regulations that exempt construction noise as long as it occurs during specified periods. There is a logical problem with this in that the schools and the town's library are noise sensitive and don't benefit from the temporal restriction.

It is interesting that the FTA manual referenced in the DEIR as a source for data, specifically warns against exclusive reliance on local ordinances.

P10-6
CONT

Generally, local noise ordinances are not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should take into account the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use.

Transit Noise and Vibration Impact Assessment Federal Transit Administration 2006

The Federal Transit Administration reference undermines the DEIR's solitary reliance on the county's noise regulations to substantiate the notion that somehow the project's noise impacts are less than significant because they are exempted from regulation by the county's ordinances. But CEQA specifically includes the regulatory standards of other agencies in its guidelines. The FTA and Caltrans criteria referenced above apply to a broad range of construction equipment and it is entirely appropriate to propose mitigations that are consistent with these standards.

The OSHA beepers

One element of the Boston program required that the sound level of the OSHA beepers be modulated according to background levels. They could not be 5 dB louder than ambient sound. Current models of beepers are adjustable and some are even designed to automatically vary sound output with background levels. Adoption of the Boston condition would mitigate potential problems in the quiet Los Osos setting and still offer the necessary margin of worker safety.

P10-7

Generator Noise

Another prominent noise source could be electrical generators used during construction and during project operation when they would be used to operate facilties in times of power outages. The Avoidance option applies to operation of generators within the town since electrical equipment can be powered by connecting to the electrical grid.

The DEIR adopts a performance standard approach in dealing with noise from the backup generators. In proposing mitigations for the noise from the backup units it states that noise should not exceed a 45 dB level at the nearest residence. The condition is slight misreading of the county's requirement since measurements are to be made *at the property line* but the concept is workable. The mitigation condition might apply to stationary generators and the mobile units.

P10-8

But there is an issue in that it could be difficult to meet the 45 dB standard. The DEIR asserts that a building housing a standby power generator would reduce the noise from a generator by 20 dB. The reduction is valid for conventional construction for a structure *with windows closed*. The generator requires venting for exchanging air and exhaust. Meeting the 45 dB property line standard may be impractical without extraordinary construction expense. This issue, and the question of providing similar shielding to equipment during construction or for the mobile generators used with the pocket pump stations, needs development. It may not be practical to bring noise levels to the point where they meet the County standards. If this is the case it would be appropriate to cite the temporary nature of such noise events and consider this impact with those covered in the project's statement of overriding considerations.

STEP Alarms

A tank alarm would be designed to be audible and 5000 of these going off at random intervals throughout the community would be a significant problem. The mitigation would be AVOIDANCE. The telemetric system (assumed to exist in some sections of the DEIR) should be made a project condition or mitigation.

P10-9

Septage Pumping

The pumps will make noise and, with the close proximity of homes, there will be noise issues. The DEIR provides no information on this but the Boston approach of requiring use of quieter equipment is a reasonable mitigation. To support this, a survey of available equipment would need to be made. This is not technologically daunting and manufacturer information may be available. The DEIR consultant should develop this information and provide a performance threshold for septage pumping equipment for the STEP system and for the Vactor equipment if the gravity system is selected.

P10-10

Air Vacuum Valves

This offers the same opportunity for resolution as the septage pumping issue. The DEIR says the pressure release will be imperceptible but provides no supporting information. Hopefully the DEIR analyst has data to substantiate the valve's inaudibility. Inaudibility should be made a procurement standard.

P10-11

Summary – Noise Managment

The Boston and Ventura County programs provide a useful template for preparation of a noise management program for construction and operation of the wastewater project. The fundamental features are: 1) to encourage selection of quieter equipment, 2) develop noise management plans during the construction phase that put separation between noise sources and noise sensitive activities, 3) providing for documentation of implementation and, where needed, oversight and enforcement. P10-12

Soil Displacement

The DEIR presents excavation requirements solely in terms of cubic yards of excavation. But the surface area of disturbance is of importance too. For homeowners, it is the amount of landscaping that will be destroyed or displaced. Some natural areas will be disturbed and there will be increased potential for soil erosion. Cultural artifacts are typically found close to the surface. The nature of the qualitative differences between the excavations for the STEP and gravity system is obscured by the reliance on cubic yards of displacement. The DEIR should give the area of the surface disturbance for the alternate collection systems as well as the volume of displacement.

There may be a problem with the assumption concerning the size of a STEP tank excavation. This is significant because whatever number is used is multiplied by the number of tanks. The DEIR gives the dimensions as 40 cubic yards for a tank that is 16 by 8 (Appendix B, page 3-9). The 1,500 gallon Orenco fiberglass tank has 15 x 7 dimensions. Installation requires side clearances greater than six inches. Orenco's installation guide recommends a one foot gap on all sides. This makes the area of the excavation 17 x 9 at the broadest portion of the tank (the flange around the mid-section). P10-13

Moreover, the sandy soil in Los Osos cannot be reliably excavated with straight down sidewalls. If the excavation slope is 2:1 and the slope is calculated to the midpoint flange on the tank, the area of the disturbed surface measures 25 x 17. The Figure 3 on the following page illustrates the scale of such an excavation. The DEIR estimation of soil displacement should be recalculated to allow for proper side clearance for installation and likely slope of the excavation. It is likely that this will reverse the conclusion that there is less soil displacement associated with STEP[3]

The Biologic Resource section of the EIR is inconsistent with the DEIR's comments on soil displacement. The section wrongly asserts that there is a "lack of excavation and habitat disturbance" with the STEP alternative (page 5.5-40). This mistaken notion leads the writer to conclude that the potential impacts, "to sensitive natural communities associated with the ESHA within the community of Los Osos" are significantly greater with the gravity collection system". It appears that the opposite is true – the STEP system displaces as much as twice the surface area as the gravity alternate. Would an opposite conclusion regarding disturbance of natural areas alter the DEIR's conclusions and mitigations? P10-14

[3] A spreadsheet describing surface and soil displacement was prepared independently of that produced for the DEIR. A copy of this in interactive spreadsheet format is appended to the email version of this letter.

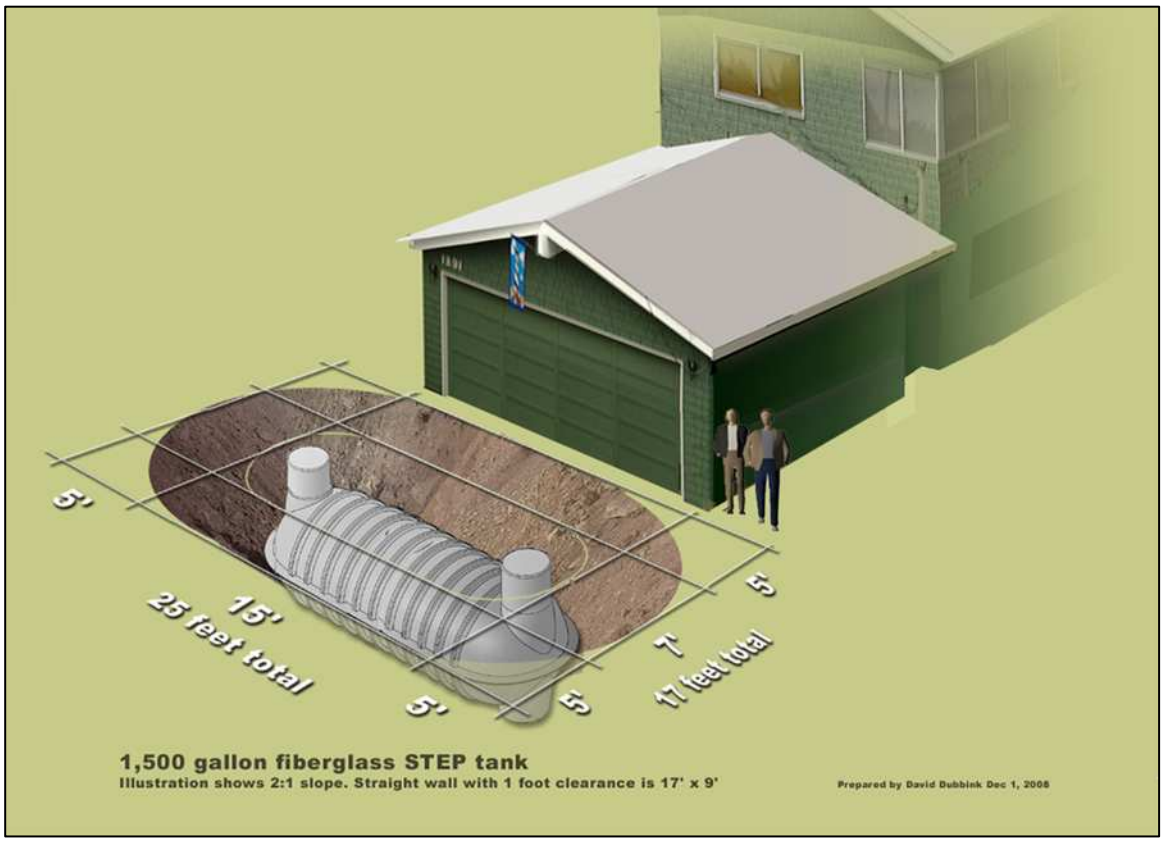


Figure 2: STEP Excavation

The DEIR notes that, when the excavations are made for STEP tanks, it will require the export of 15 cubic yards of material. The DEIR doesn't say what happens to these three truckloads of material when they are hauled away. Given the front yard locations of half the septic systems in town, the excavated material will include the residue of leach fields and perhaps fragments of septic tanks that have remained in use until the moment of excavation. It will not be "clean" fill. The total quantity of removed material is over 70,000 cubic yards which is the equivalent of a football field piled four stories high. It might be noted that the DEIR says that the existing septic tanks will *not* be hauled away but be filled with sand or converted to graywater reservoirs. But this will not be possible on small lots since the STEP tanks excavations involve the entire front yard and would include the septic tank and its leach field. Is the question of whether there are significant environmental effects involving the hauling and disposal of the leechfiled and septic tank remnants being overlooked?

P10-14
CONT

Traffic:

The traffic analysis by Associated Traffic Engineers (ATE) makes the mistaken assumption that 9th and 10th Streets are through connections from Los Osos Valley Road to Santa Ysabel. The traffic consultants should verify that a change in their assumptions about the 9th and 10th Street configurations does not change the conclusion that the mode

P10-15

of wastewater collection or the treatment method has a less than significant impact on roadway congestion.

The ATE study includes a very brief discussion of traffic problems experienced during the construction period. The discussion of traffic impacts in the main DEIR adds information on the numbers of vehicle movements associated the construction phase of the various projects. The numbers are taken from the Air Quality analysis and were not part of the ATE traffic study.

P10-15
CONT

While the numbers of vehicles may not be consequential in terms of impacts on level of service there are other qualities of traffic that might pose concerns.

- There could be concentrations of truck traffic during construction, such as hauling rock to the Broderson site.
- There could be localized air quality issues.
- Safety could be a problem at intersections that lack turning lanes for big trucks.
- The extra trucks increase noise. (Heavy trucks have the same acoustic impact as ten or more cars).

It would be useful to identify where these qualitative impacts might occur and insure that the proposed mitigations are adequate

Project Timing

The DEIR assumes that construction of the wastewater collection and treatment system will be concluded in two years. There is no consideration of what may be a significant timing problem regarding installation of a STEP system.

There are two STEP tank placement scenarios. Installation can begin at any time as long as the STEP tank is placed outside of the area presently occupied by a septic tank and its drain field. Similarly, work can start immediately if the STEP tank can be installed in the same position as the septic tank. As long as the drain field remains functional, the STEP tank can be used as a conventional septic tank until the collection and treatment system is in place.

P10-16

But there is another condition. If the STEP tank occupies any territory that is within the drain field, installation must be delayed until after the collection and treatment systems are operational. Several thousand parcels may be of this type and it will take time to make the installations. Given a schedule where 10 tanks are installed every working day it could be as much as an additional year before all tanks are in place and connected. The numbers of tank installations that might have to be deferred should be calculated and, if there is an impact on project scheduling, this should be stated.

The differences in timing also affect the pattern of neighborhood disruption since it is likely that the tank installation work would need to be done in two passes, first installing tanks where the leachfields can be maintained and a second phase to install the tanks after the wastewater treatment facility was operational. The two phase installation program could impact the DEIR's assumptions concerning traffic disruption and air quality since these are predicated on a two year completion schedule.

There is also an issue related to disturbance of cultural resources. This is a significant concern with both the gravity and STEP systems. The adopted construction strategy for the gravity system was to shift excavations to backup worksites if cultural materials were encountered. This concept works for STEP tank installations too but there is a complicating factor. What is the mitigation strategy if cultural materials are encountered during STEP tank excavations after an existing septic tank and drain field is disabled? It would seem that the residence would need to be vacated for the duration of the archeological excavations. P10-17

Environmental Justice

California law defines Environmental Justice as "the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Government Code Section 65040.12 and Public Resources Code Section 72000).

The proposed payment structure for the wastewater system imposes uniform fees for service without any consideration of the differential impact of the fees on different population groups. The fees will be particularly burdensome on lower income families.

Data from the US Census illustrates some of the issues. 100% of Hispanic homeowners have a mortgage. By contrast, almost a third (29%) of non-Hispanic homeowners don't have a mortgage. Because of this disparity, the monthly burden of ownership costs (as a percentage of household income) for Hispanics are already 2-5% higher than monthly costs for non-Hispanics. And in Los Osos, even home ownership is not a guarantee of financial security. 142 homeowners reported incomes that were below the poverty line.

It is recommended that renters pay no more than 35% of their income for housing expenses. The percent of Los Osos renters paying more than this limit is quite high; 41%. A surprising 27% percent are paying rent that is more than 50% of their household income. In this setting, an equal distribution of costs does not result in an equal impact. The argument that the project provides proportionate benefit to residents doesn't apply to the public works project. The town is already served by septic tanks that, on an individual basis, are satisfactory. The wastewater treatment facility is required to meet state water quality objectives which are being implemented through "enforcement" actions by the Water Quality Control Board. Relief from fines is the major "benefit" to residents. P10-18

Additionally, all of the wastewater treatment proposals include a component referred to as "homeowner responsibility". These are presented in the Fine Screening Report and the DEIR in the form of averages but individual homeowners will not be experiencing averaged impacts and costs. The distribution of costs is irregular and highly site specific.

There are likely to be economic inequalities in that on-site costs will be proportionately higher for small lots than for large ones. This is particularly true for owners of small lots where STEP tanks need to be strengthened so that they can be placed under driveways. (The illustration in Figure 2 is based on a photo of an actual structure where the entire

"yard" is currently used as a driveway). The standard fiberglass tank STEP is not traffic rated and it has two access hatches that protrude above ground. The smaller the lot, the greater the likelihood that tank installation will require extraordinary construction expense. The owners (or renters) of the community's more modest homes will end up paying more for compliance than the owners of larger properties. This is not "fair treatment" under California's definition of Environmental Justice.

There are few people who have reviewed the Los Osos situation who do not appreciate the fact that there are profound social issues related to displacement of lower income residents and inequitable assignments of costs. The question is how the DEIR could conclude that there are not significant environmental justice issues. The DEIR examines the environmental equity question using GIS technology applied at a broad and generalized scale (circles drawn on a map). This technology might be applicable to large scale federal projects but the differential costs of compliance with environmental regulation are diluted by averaging. Considered at the parcel and household level it is clear that there are problems of inequity. The section of the DEIR addressing environmental justice issues needs to be overhauled with suitably scaled analysis and appropriate conclusions and proposed remedies.

P10-18
CONT

Number of STEP Tanks?

The Fine Screening report said there are 4769 septic tanks to be replaced. The DEIR says the number is 4679 (there are two places where it uses the 4769 figure). The Project Description in Appendix B gives the Fine Screening Report's 4769 figure.

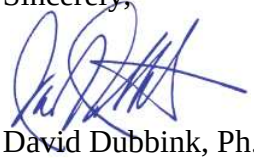
Being a bit inconsistent on the number isn't catastrophic but it would be helpful to improve on the impressionistic data taken from the Fine Screening report. Reference is made to percentages of front and rear yard installations but a the mapping of septic tanks shows side yard and center courtyard installations too. Also, what happens at the many locations where a 1,500 gallon household tank isn't sufficient? The service area includes multiple unit residential buildings, commercial complexes and several schools. Would consideration of the differing location and scale of some of the on-site treatment systems change anything?

P10-19

Conclusion

Your attention to these questions is appreciated. The DEIR is encyclopedic and certainly sufficient to withstand legal challenge. In terms of breadth of topics, everything seems covered. The issues arise where the DEIR's rather generic format fails to address specific local issues. I am hopeful that questions posed in this discussion along with the suggested mitigations for identified problems will be helpful in refining the project proposals and in addressing environmental issues.

Sincerely,



David Dubbink, Ph.D., AICP

David and Cher Dubbink, January 26, 2009 (Letter P10)

Response to Comment P10-1

This comment provides additional information regarding the noise setting within the community of Los Osos. Similar to most communities, the greatest noise levels within the community of Los Osos is generated by traffic along roadways. The Draft EIR Appendix L-1, Expanded Noise Analysis, provides noise measurements along roadways to convey the level of noise along roadways within the community. No specific comments on the impact analysis are provided. No further response is necessary.

Response to Comment P10-2

This comment states that the noise analysis addressed traffic noise, but not two of the major sources of noise which are noise from STEP system alarms and pumping of septage. These noise levels are infrequent and occurs once at each property location every 18 months to 3 years. Although noise would be generated from an alarm system or a truck pumping septage from a STEP tank, this noise level would be temporary and considered less than significant. Audible alarms at each STEP tank location are not necessarily a component of a STEP system; the typical system monitoring approach would be to trigger an alarm at the treatment plant so that system operators could respond.

Response to Comment P10-3

This comment is concerned that noise from other sources such as septage pumping or air valves are not addressed in the Draft EIR. These sources were determined not to be a noise issue. See Response to Comment A8-172 regarding noise from STEP pumps and Response to Comment A8-173 regarding noise from air vacuum valves.

This comment also states that noise from pile driving during construction is an issue. Noise from pile driving is an issue and Mitigation Measures 5.10-C1 and 5.10-C2 are recommended to reduce potential vibration noise to less than significant.

This comment also states that vibration from pile driving is likely to damage buildings within Los Osos. See Response to Comment A8-167 regarding vibration impacts associated with pile driving.

Response to Comment P10-4

The comment is concerned about vibration or noise levels that might impact the natural environment. Mitigation measures have been developed to reduce impacts to nesting bird species. The measures (5.5-A11 and 5.5-A12) have been slightly modified to address more specifically construction-related issues. See Response to Comment A8-163.

Response to Comment P10-5

This comment expresses a concern regarding the utilization of pile driving. See Response to Comment A8-167 regarding avoiding pile driving or identifying an alternative to pile driving to reduce potential vibration impacts.

Response to Comment P10-6

This comment expresses a concern regarding noise levels associated with construction of the proposed project and the thresholds that were identified in the Draft EIR. See Response to Comment A8-168 regarding the use of average construction noise levels as well as a monitoring program.

Response to Comment P10-7

This comment expresses a desire for the adoption of OSHA beeper modulation requirements. See Response to Comment A8-169 regarding construction equipment beepers.

Response to Comment P10-8

This comment expresses a concern regarding noise levels from electrical generators that will be used during construction. See Response to Comment A8-170 regarding noise from backup generators.

Response to Comment P10-9

This comment expresses a concern regarding noise levels generated by tank alarms. See Response to Comment A8-171 regarding STEP tank alarms.

Response to Comment P10-10

This comment expresses a concern regarding noise levels generated by pumps. See Response to Comment A8-172 regarding noise from STEP pumps.

Response to Comment P10-11

This comment expresses a concern regarding the inaudibility of air vacuum valves. See Response to Comment A8-173 regarding noise from air vacuum valves.

Response to Comment P10-12

This comment discussed the need for a noise management plan. Other than the pile driving, which has specific mitigation to control its noise, the construction noise created by the proposed project would be typical of any construction project in the County where underground utilities are installed. Other construction projects in the County have not been required to prepare a noise management program and no unique factors have been presented that would suggest that construction noise impacts from this project would be greater than any other construction project. In addition, a noise monitoring program would be redundant since the proposed project will be monitored by County inspectors who are required to enforce the Mitigation Monitoring and Reporting Program for the proposed project.

Response to Comment P10-13

This comment states that there may be a problem with the assumptions concerning the size of the STEP tank excavation within the Draft EIR. See Response to Comment P03-1 for a discussion on the size of the excavation for STEP tanks. See Topical Response 13, Shoring and Excavation, regarding the shoring requirements for OSHA. The actual calculated amount used in the Draft EIR is 33.2 cubic yards. See Appendix K-2 Surface and Soil Disturbance table provides more detail on the STEP/STEG collection system excavation calculations.

Response to Comment P10-14

This comment is concerned with a discrepancy in the discussion between the STEP alternative (Proposed Project 1) and projects that use the gravity system. The commentor is correct, the Project discussion should read as follows:

County of San Luis Obispo Coastal Zone Land Use Ordinance (CZLUO)

- **CZLUO Sections 23.07.160 – Section 23.07.166: Sensitive Resource Area (SRA).** The collection system for Proposed Projects 2 and 3 would be the similar as that which is proposed for Proposed Project 1 but could differ substantially with potential impacts to sensitive natural communities associated with the ESHA within the community of Los Osos. These differences are focused on the differences in disturbance associated with the ~~lack of~~ excavation and habitat disturbance associated with the STE tank installation. The gravity collection system for Proposed Projects 2 through 4 would have substantially less impacts in the community, as there is no need for the excavations associated with the STE tank installation. The collection system for Proposed Projects 2 through 4 will also have the development of seven pump stations and 12 pocket pump stations within the Mid-town property and parcels within the community of Los Osos.

- **CZLUO Section 23.07.170: Environmentally Sensitive Habitat Area (ESHA).** The collection system for Proposed Projects 2 and 3 would be the similar as that which is proposed for Proposed Project 1 but could differ substantially with potential impacts to sensitive natural communities associated with the ESHA within the community of Los Osos. These differences are focused on the differences in disturbance associated with the ~~lack of~~ excavation and habitat disturbance associated with the STE tank installation. The gravity collection system for Proposed Projects 2 through 4 would have substantially less impacts in the community, as there is no need for the excavations associated with the STE tank installation. The collection system for Proposed Projects 2 through 4 will also have the development of seven pump stations and 12 pocket pump stations within the Mid-town property and parcels within the community of Los Osos.

- **CZLUO Section 23.07.172 - Section 23.07.174: Wetlands, Streams, and Riparian Vegetation.** The collection system for Proposed Projects 2 and 3 would be the similar as that which is proposed for Proposed Project 1 but could differ substantially with potential impacts to sensitive natural communities associated with the ESHA within the community of Los Osos. These differences are focused on the differences in disturbance associated with the ~~lack of e~~xcavation and habitat disturbance associated with the STE tank installation. The gravity collection system for Proposed Projects 2 through 4 would have substantially less impacts in the community, as there is no need for the excavations associated with the STE tank installation. The collection system for Proposed Projects 2 through 4 will also have the development of nine pump stations and 13 pocket pump stations within the Mid-town property and parcels within the community of Los Osos. All additional pump station developments associated with the collection system of Proposed

Projects 2 through 4 will incorporate the minimum required setbacks from all wetland, streams, and riparian vegetation.

The conclusions with regard to the overall project selection remain unchanged. The removal and replacement of some septic tanks have been accounted for in the air quality calculations. These calculations have no effect on biological issues.

Response to Comment P10-15

This comment expresses concern that the traffic analysis did not accurately evaluate potential impacts at the 9th Street and LOVR intersection and 10th Street and LOVR intersection. The traffic analysis evaluated potential project level of service impacts at intersections. Page 5.8-2 of the Draft EIR (second and third paragraphs), and Appendices J-1 (third and fourth paragraph on page 5.8-4) and J-2 (seventh and eight paragraph on page 3) states that 9th and 10th Streets extend between Santa Ysabel Avenue on the north and Los Osos Valley Road (LOVR) on the south. It is acknowledged that 9th and 10th Streets do not connect between Ysabel Avenue on the north and LOVR. The level of service analysis at the 9th Street and LOVR intersection and 10th Street and LOVR intersection evaluated the number of vehicles performing turning and through movements and adding traffic volumes to determine the level of impact. The conclusions in Appendices J-1 and J-2 are correct.

This commentor also asked if traffic safety, air quality, and noise levels related to truck movements were evaluated. Traffic safety is addressed on Draft EIR page 5.8-9 and Appendix J-1, Expanded Traffic and Circulation Analysis, page 5.8-26; air quality is addressed in Draft EIR Section 5.9, Air Quality, in the Draft EIR and Appendix K-1, and truck noise levels are addressed in Draft EIR Section 5.10, Noise, and Appendix L-1, Expanded Noise Analysis.

Response to Comment P10-16

This comment expresses a concern about the phasing and construction details of STEP tank replacement. The Draft EIR was based on the most current information available at the time as addressed in many technical reports and studies (Carollo Technical Memos and the Fine Screening Report, all incorporated by reference into the Draft EIR) and the exact construction details and specifics of phasing are not known at this time. The County is pursuing a Design-Build Request for Proposals wherein teams of design engineers and construction contractors will formulate their plans, schedules, and costs for constructing the wastewater collection, treatment and disposal facilities.

Response to Comment P10-17

The commentor suggests that STEP/STEG tanks could be placed at the location of the existing septic tanks to avoid impacts to cultural resources. While it may be possible to place STEP/STEG tanks within the footprint of the existing septic tanks, the location of the septic tank would have to be in the front yard to provide access for the County. A difficulty with the replacement model is the time between decommissioning the existing septic tank and replacement with the new STEP/STEG. There could be serious delays in the change in service that would leave residents without any water service.

Response to Comment P10-18

This comment expresses a desire for additional analysis associated with environmental justice issues. See Topical Response 2, Project Costs regarding the overall project costs.

Response to Comment P10-19

This comment asks what is the correct number of septic tanks to be replaced. The correct number is 4,769 septic tanks will either be replaced with STEP/STEG tanks or abandoned. The incorrect number of 4,679 should be replaced by the correct number of 4,769:

- Page 3-21, Table 3-3
- Page 3-38, Second paragraph
- Pages 3-47 to 3-50, 11 times in Table 3-7
- Page 3-53, last line
- Page 3-62, first line

The comment also expresses concern about the impacts of replacing septic tanks currently located in side yards and center courtyards as well as replacing existing septic tanks larger than 1500 gallons that serve multifamily units, commercial complexes and several schools. As stated in Draft EIR Section 3.3.2, Proposed Projects, page 3-35, the LOWWP STEP/STEG tanks would all be located in the front yard of each property. This will facilitate access for construction and maintenance. The impacts for abandoning existing septic tanks in center courtyards or side yards would be similar to the impacts of abandoning septic tanks in back yards since the property owner would have the added cost of constructing a longer lateral, and possibly a low pressure grinder pump, to carry sewage from the building to the new STEP/STEG tank or to the property line connection for a gravity sewer system. A larger surface area would also be disturbed by construction with the associated increased potential for impacts to snail habitat, cultural sites, and existing landscaping and other yard improvements as described in the Fine Screening Report; Draft EIR Sections 5.5, Biological Resources; 5.6, Cultural Resources; and 5.12, Visual Resources; and Draft EIR Appendices G, Biological Resources; H, Cultural Resources; and N, Visual Resources. Similarly, installing new STEP/STEG tanks larger than 1500 gallons when needed would have proportionately higher impacts based on the larger surface area affected and required excavation.

The comment also expresses concern about potentially altering the location and scale of on-site treatment systems. These issues are discussed in Section 7 of the Draft EIR, Appendix P-3 on On-Site Treatment Systems, the On-site Treatment Technical Memorandum (January 2008), and in the Rough Screening and Fine Screening Reports.

Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Dept of Public Works
County Government Center Room 207
San Luis Obispo, CA 93408 Telephone 805.781.5252

State Clearinghouse Number: **2007121034**
Comments Must Be Received By: January 30, 2009

Dear Mark Hutchinson, Jan 26, 2009

Enclosed please find my comments for the LOWWP DEIR, including a few attachments for clarity.

I also want to express my concern with the process: I understand the dilemma that the county (and LO!) are in with the "time line rush" but I believe that the two projects, the wastewater project and the water reuse project must be intimately connected to get the best environmental projects at the lowest cost. I am concerned with the "throwing away" of farmland & water at Tonini. If the two projects were united we may not have the same situtation.

Sending out a "half" project for public review, that may need to be revised because of new insights, may led to a misinterpretation of intent and cause ill feelings against the county. Or we may not be able to pursue a great water recharge idea because we didn't consider it in the wastewater project. Or we may need another EIR if we don't do the complete package of both projects first.

examples of "possibilities" are included in my comments.

Thank you in advance for your efforts in trying to protect Our National Estuary with the fragile surrounding habitat, our precious farmland and the wonderful town (and people) of Los Osos.

Marie Smith

Marie Smith
1149 First Street
Los Osos, CA
(805)528-6656

PROOF READING COMMENTS:

1. There was a lot of repetition: this may good for someone who just goes to a particular section, but sometimes it was overdone!

example of repetition on the same page, Page 2-3:

top of page

Another important consideration of the Project involves water resources issues related to seawater intrusion that is contaminating the Los Osos groundwater basin. While the purpose of the LOWWP is to develop a community wastewater system, implementation measures for effluent disposal can enhance opportunities for the water purveyors to improve the local water resources. P11-1

bottom of page

Another important issue relating to the LOWWP involves water resources issues related to seawater intrusion that is contaminating the Los Osos groundwater basin. While the main benefit of the LOWWP is compliance with RWQCB directives to alleviate groundwater contamination from existing septic systems, implementation measures adopted for effluent disposal methods can also enhance opportunities for the water purveyors to improve the local water resources.

2. some typing/document errors:

page 3-8 word level : "On March 27, 2007, the County Board of Supervisors certified a "evel of P11-2

page xi repetitions:

NI No Impact
NI No Impact
RWQCB Regional Water Quality Control Board
RWQCB Regional Water Quality Control Board P11-3

page ix repetition:

AFY acre-feet per year
AF Acre-feet
AFY acre-feet/year P11-4

page 2-41 unfinished sentence

5.6-B6 ... Mechanical backhoe trenching shall be conducted within the P11-5

page 2-41 has extra H

5.6-B5 H Historic-era ranch/farm complexes P11-6

Table 5.5-1 is mislabeled, it should be called Biological Resources Significance Determination (references: geology section & Table 5.5-2 is called Biological Resources Proposed Mitigation Measures) P11-7

page 5.8-2 2nd sentence from bottom of page has error: "there are is goal" P11-8

page 7-49 table 7-6 is on page 7-37 therefore statement "Table 7-6 below is wrong" P11-9

page 7 -65 "All four proposed projects assume a 46-acre storage pond" = 46 acre foot storage pond (reference: at bottom of Page: "For a 46 AF pond, the site area would be about 6 to 8 acres.") P11-10

MY COMMENTS/OBSERVATIONS:

NOTE 1: There are many repetitions in the document. I will only refer to one statement for each of my comments: eg. if a correction is to be made to the document, then the corrections will also have to be located in the rest of the document.

NOTE 2: I realize the county is trying to deal with the wastewater project separate from the future water project(s), but many of my comments are based on the belief that we all need to work together now to do what is best for our aquifer, our town and the Morro Bay National Estuary

NOTE 3: I have (*attached*) several documents, referenced in my/LOWWP DEIR comments, for your convenience.

comment:
= I found the maps and charts in the project description section helpful especially
map: Exhibit 3-3 Potential Treatment Plant & Effluent Disposal Sites
and
Table 3-7: Summary of Proposed Projects Los Osos Wastewater Project (LOWWP)
and
Table 7-7: Screening of Wastewater Treatment Process Alternatives BUT:
comment: page 7-47, & 7-48 Table 7-7 Screening of Wastewater Treatment Process P11-11
= could include biosolids removal comparison

comment: Table 7-6: Screening of Wastewater Treatment Plant Site Alternatives P11-12
= baseline criteria "costs" appears to be mislabeled

comment: page 4-3:
= Map exhibit 4-1 "Environmental Setting Map" doesn't show the surrounding greenbelt ie: adjacent to the Broderson effluent disposal site is the Morro Dunes Ecological Preserve

P11-13

comment: page 1-4 second sentence:
" liquid waste is dependent on the ability of the soil to disperse the pollutants. Key controlling factors include soil composition and the vertical distance between the leach field and the ground water."
= I believe that the pollutants are not just "dispersed" but that there are microorganisms at work too! "where microorganisms decompose the nitrates" could be added to educate people that it is not just a dilution process.

P11-14

comment: page 1-4 third paragraph:
= the word groundwater is not reflecting the complexity of the situation.
sentences in the third paragraph that are considering problems with ground water pollution are referring to the upper aquifer and then the sentence "to compound matters, the Los Osos area draws its potable water supply from the groundwater" are referring to the lower aquifer: (it is my understanding that most of the potable water is now being taken from the lower aquifer and that is why the salt water intrusion is happening!)

P11-15

comment page 2-27: Table 2-8: Summary of Environmental Impacts and Mitigation Measures
"5.2-B: The proposed project would not degrade groundwater quality."
LTS NI LTS NI LTS NI LTS NI are the impact levels given to all the projects
= We may need to return treated water to the prohibition zone to make the above statement true:
* eg: what about when septic water is no longer going into the upper aquifer?
we need to protect against worse pollution: what is going to fill in the void in upper aquifer that is created by removing septic tank water (some negative possibilities are farmland water, the old Turri Road dump, and seawater intrusion from the bay).

P11-16

= more comments concerning the removal of septic tank water from the area:
= 1. is there any possibility of sink holes or settling of buildings with the moving around of water?

P11-17

= 2. We may need to return treated water to the prohibition zone area to keep LO green and the estuary fringe & wetlands alive as required by

P11-18

The Estero Area Plan: "protect and manage sensitive habitats", and "Highly sensitive habitats include the riparian woodland and riparian scrub, freshwater marsh and coastal salt marsh" and "The Morro Bay tidelands and adjoining shoreline areas are important areas for preserving the complex ecology of the bay as well as unique scenic amenities. Marshlands are particularly important as a source of food and refuge for marine life and also provide feeding and nesting areas for a variety of waterfowl and shorebirds."
(map of wetland locations: LOWWP DEIR exhibit 5.5-2)

P11-18 CONT

= 3. the lost of wetlands affects nature directly, and there may also be unforseen consequences: ie: when the fringe "dries up" people may be able to build closer to the estuary and the wildlife corridors, adjacent to the estuary, may be lost.
"Setbacks are measured between the upland extent of the wetland vegetation and development."(p 7-87 of the Estero Area Plan)

comment: page 1-10
"Another important consideration of the Project involves water resources issues related to seawater intrusion that is contaminating the Los Osos groundwater basin. While the purpose of the LOWWP is to develop a community wastewater system, implementation measures for effluent disposal can enhance opportunities for the water purveyors to improve the local water resources."
= seawater intrusion was caused by everyone and therefore correction of this problem should be paid by everyone, including private well users.
= water purveyors need to be involved now to have the best water management plan

P11-19

comment: page 7-65 Urban Reuse "Urban reuse consists of using tertiary treated, disinfected effluent to irrigate lawns and ornamental plants."
= There are many possibilities: One example: If a decision is made for urban reuse, ponds in the mid-town site could be used to store water and by pipe/seepage replenish the bay fringe and construct wetlands. And ponds could become not only storage & recharge, but be used as a recreational park, or be productive: produce fish, water plants! And if the Broderson leachfields are temporarily "out of order" this could be used to handle the tertiary treated water that already left the out of town sites, headed for LO. (see my last comment, my general comment)

P11-20

comment page 2-39 5.5-A15 Mitigation lands within the Broderson property shall include land that "is characterized by habitat types with an open canopy";
= what about the oak, mansanita and eucalyptus forests? Please do not destroy one type of habitat in order to mitigate another -
suggestion: do an exchange with adjacent land that is already full of veldt grass to build the disposal site and keep all these good habitats.

P11-21

comment page 3-43
"The Broderson site would be accessed by a gravel road that extends south from the end of Broderson Avenue as shown on Exhibits 3-6 through 3-9. The site would require fencing to limit public access since the treated effluent would meet secondary but not the more stringent Title 22 tertiary standards for recycled water."
= hikers, runners, horseback riders use the Broderson N/S trail - what will happen to their trail? how will they access the oak forest trails and the higher elevations?

= In fact the Estero Area Plan, on page 157, would support keeping the Broderson trail open for hikers! P11-22

==========

ESTERO AREA PLAN UPDATE 5-21 CIRCULATION
NOVEMBER 2004 BOARD OF SUPERVISORS-APPROVED PLAN
1. Trails. The county should work with the community and affected property owners to develop a riding and hiking trails program with major emphasis on a trail route across the Los Osos South Bay hillsides to Montaña de Oro State Park and scenic routes within and on the fringe of the community linking public recreation areas.

==========

comment page 3-42
"as long as the instantaneous application rate and the annual effluent disposal total do not exceed the leachfield's design capacity and annual hydraulic loading capacity respectively, leachfield disposal" can be used... "during the winter wet season when the sprayfields are not available
= hopefully the water seeps which come from rainfall on the land above the Broderson site have been taken into consideration P11-23
= if the leachfield is plugged, or the timing of the destruction & reconstruction of the leachfield, or an earthquake coincide with heavy rainfall then what?

comments page 3-65 "About every 5 to 10 years when clogging occurs, the effective flow rate decreases significantly and the leachfield requires excavation. The subsurface ground would be ripped or disked, and then the leachfield would be reconstructed"
and (page 5.9-15 "and a possible second pump station at Broderson would be required to achieve equal distribution throughout the disposal field."
= is this the best we can do? Adjacent homes & nearby wildlife & the many hikers/ runners who use this area will be affected P11-24
- consider the significant noise (page 5.10-19) and significant air pollution and significant cost during the initial construction and 5-10 year replacement.

- consider the significant loss of materials with the periodic replacement of the geotextile fabric, leachfield pipes, native soil backfill (page 5.10-18) and the use of the trucks & manpower; plus the ongoing maintainance of pumps & monitoring of disposal flow.
- there will also be continual sound (pumps) & visual effects (pump station, fencing, and lighting (appendix N page 5.12-36), and sometimes maintenance trucks.)

P11-24 CONT

= If the water is treated to a higher level, (necessary according to P 7-67) it can be injected and/or used to grow plants and/or have nature ponds, use it as it percolates back into the ground. If leachfields are still used, with higher purification treatment, they may not need to be replaced as often. Let's be more creative! As for cost, this would be part of the water project because more water would reach our aquifers.

= Will the lights be like the lights in the Ralphs parking lot, which cause stress on nearby neighbors? If so, the lights could be turned on manually if they are needed for emergencies AND there could also be an alarm system set up with motion detectors which turn on the lights if intruders are present.

P11-25

= comment for all projects in LO that require lights: night sky viewing is important to the people of LO and our visitors.

= are there any other areas which can be used to reach the lower aquifer?
ie: The DEIR's Appendix P (on Page A-4, under Appendix A: Past Project Documents) lists a Cleath & Assoc. report titled
"Scenic Way Investigation with East Side WW Disposal (Draft) July 2003
(*map & info: see attachment 1*)
- two test holes in this report, "TH2 & TH4, were drilled at the primeter of the ground water basin" and "intercept Francisan Formation metavolcanics at depth".
= Is there a possible path to the lower aquifer near here?

P11-26

comment page 7-8 Table 7-1 and Appendix P pages 5,6:

= Why were no injection wells listed for consideration? Circumstances may change to where we want to and can use them

= Will we need another EIR if we want to add them later and they haven't been listed in this document as a possibility?

P11-27

Turri Road/Tonini
comment page 2-42
5.8 - A1 "d) Buses, Bicycles and Pedestrians. The work zone shall provide for passage by buses, bicyclists and pedestrians, particularly in the vicinity of schools."
= Turri is widely used by walkers, bikers & runners: if d) is not followed then notice needs to be given to the local biking clubs and posted not only at LOVR but also at the South Bay Blvd. entrance too!

P11-27 CONT

comment page 5.9-9; Table 5.9-3: Air Quality Significance Determination under treatment:
"Expose sensitive receptors to substantial pollutant concentrations? PS PS PS PS LTS
Create objectionable odors affecting a substantial number of people? LTS LTS LTS LTS NI"
= becomes LTS & NI under accumulative?
= Please make the quality of air on Turri Road a top priority: Having healthy air is extremely important to the many walkers, bikers & runners who use Turri Road, a scenic country road. Please observe that this is also a windy area so particles may be carried "on the wind".
= Turri is published as a biking route in the county's Regional Rideshare map.

P11-28

comment page 5.11-9 Disposal Sites:
"According to the 2007 Crop Report for San Luis County, this crop had a per acre value of $5,888.76, and rangeland grazing had a value of $10 per acre. Therefore, the potential lost revenue associated with using the Tonini parcel as a disposal site is $1,008,398 per year. "
= what an expensive way to go! take valuable and productive land to use as a dump!

P11-29

comment page 7-68: "the environmentally superior alternative is Proposed Project 4 for the following reasons:"
"3. **Consolidates LOWWP Facilities.** Since the sprayfields will be located at Tonini, locating the wastewater treatment plant and storage pond on the same site for Proposed Project 4 reduces the potential impacts to biological and cultural resources and prime agricultural land. and
4. **Agricultural Operations.** Because Proposed Project 4 will convert only one agricultural parcel to public purposes, this alternative has the lowest loss of potential agricultural revenue to the local economy. "
= the type and size of the parcel are also important.

P11-30

comment Appendix C page 5.1-7 San Luis Obispo County General Plan Land Use Element and Local Coastal Program - Estero Area Plan
= guides us to keep the farmland as it presently exists and not to use prime agricultural land except where it can be demonstrated that no alternative building site exists:
what about:

P11-31

= Appendix C - Exhibit 5-1.2 this map shows the amount of prime & non-prime agricultural land:
Tonini has much more prime agriculture land: 178.7acres; plus non prime ag land 134.1; while the "series of parcels east of the cemetery" (names of parcels: Andre 2, Robbins 1, Robbins 2 & ?) have only: .5 prime ag. land acres; and 76.5 non prime ag. land acres P11-31 CONT
= couldn't this "series of parcels east of the cemetery" be used instead of Tonini for treated water storage or use; or for spray fields: the "series of parcels east of the cemetery" are in our aquifer, adjacent to the Branin, Cemetery, Giacomazzi Parcels and closer to LO.
= we need to get the water back to LO, not just "throw it away in a sprayfield".

If we continue to pursue Tonini here are more comments/questions:

comments page 3-65 Sprayfields:
"harvest the grass grown on the site several times a year and hauled to the Cold Canyon and/or Chicago Grade landfills (Appendix B, Project Description Data; Kennedy/Jenks Consultants 2008). "
= is this because the grass is contaminated? This seems wasteful. Is this the best we can do?
- Can we rent the area to a farmer to grow crops from the water we dispose there?
- If grass is still to be grown and it is not polluted, then harvested it for cow food.
- Can we use the area to treat the water further by using plants as purifiers and then ship the water back to LO to keep our town green & the bay fringe alive?

= I am also concerned with any plan which not only loses our drinking water, but destroys the Morro Bay National Estuary fringe by removing water from its wetlands without returning water. This Estuary fringe is critical to much wildlife and is located on the Pacific Flyway. P11-32

= I am concerned with taking any land that is under the Williamson Act and destroying the ability to return it back to farmland in the future. Let us use the land wisely.

= Since disposal of water at Tonini should only be temporary because it is in a different aquifer, I do not believe that we want to permanently "destroy" Tonini in case we find another method of water reuse/disposal in LO. I do not understand why the sprayfield cannot remain in an agriculture category if the water is treated to a higher level so that it doesn't ruin the soil. (LOWWP DEIR page 8-2, par 2 says no)
= comment figure 4.2 in appendix b shows drainage channels running through the spray field area, eventually joining the creek channel: if the water is good enough for the creek, then it should be good enough to keep the agriculture land designation.

Random questions concerning the Tonini site (or where applicable: other farmland sites):
= Who will own the land? eg. if the money to purchase it comes from the people in the prohibition zone, then any benefits from the land should be used to offset the sewer costs.
eg: Are there any minerals or mineral water to be had? any productive crops? can we rent the unused portion to farmers or use it for grazing cows?
= Does owning the land give ownership to the water in that aquifer too?
= If the Willamson Act can be "overturned" (treatment & disposal site on farmland!), then other "laws" can be overturned. What will stop this plant from expanding, becoming a population growth inducing plant?
= Who owns the treated water that came from LO? The people in the prohibition zone originally purchased the water from their water purveyors, and now will pay to clean it up; everyone using it, including private well owners, should pay for any benefits from that water beginning at the head of the pipe going back to town or other farms.
(see my general comments at the end for more)

P11-33

comments page 5.8-1 and Appendix J page 5.8-4; Appendix J: Table 5.8-4:
"Turri Road - is a two-lane rural roadway that extends north of LOVR and westerly to its connection to South Bay Boulevard. Turri Road would provide access to the Tonini sprayfield site on the west side of the roadway. Turri Road is controlled by stop-signs at the LOVR and South Bay Boulevard intersections and is located outside of the Urban Reserve Line. "
= The above paragraph and the capacity number in Table 5.8-4 don't take into account the fragility of Turri Road. Extra trucks and cars would not be good for this area. This road, with sections adjacent to Los Osos Creek (part of our National Estuary), has areas of disrepair. A very bad deteriorating section of road, already threatening the creek, is located .8 mi. from So. Bay Blvd. Not only increased wear & tear are to be considered on Turri, but also car and truck pollutants left on the road enter the creek via rain runoff.

P11-34

= page 5.8 -10, Table 5.8-2: Consistency of the Proposed Projects with Traffic and Transportation Goals and Policies talks about temporary interference during construction, but ongoing LOWWP activities should also be investigated for traffic impacts.
Turri is full of sharp curves & areas of steepness, in fact two people in a car recently got killed when their car didn't make the curve that is .8 mile from So Bay Blvd. Turri Road is listed in the county's Regional Rideshare map, and is enjoyed by many as one of the last country roads. Increased exhaust pollution and loss of road safety due to increased truck use should not happen next to bikers, runners or walkers on a rural road where visibility is not always good. Access for the LOWWP disposal site should be from LOVR, not from So. Bay Blvd. Also: this road should not be used as a connector road to SLO for the LOWWP project in LO.

P11-35

comment page 5.8-2 & Appendix J- (page 52 of 206) (and repeated throughout the DEIR) and Appendix J exhibit 5.8-1 (map)

"9th Street - is a north-south two-lane collector street that extends between Santa Ysabel Avenue on the north and LOVR on the south. The roadway continues as Bayview Heights Drive south of LOVR. The LOVR/9th Street intersection is signalized.

10th Street - is a north-south two-lane collector street that extends between Santa Ysabel Avenue on the north and LOVR on the south. The LOVR/10th Street intersection is signalized. "

= **9th and 10th streets are NOT through streets**! P11-36

the main traffic flow from Santa Ysabel near this area:

- 7th St. to Ramona, head east on Ramona and curve south onto 9th street to LOVR
- 11th St. to Nipomo, head west on Nipomo to 10th St., south on 10th to LOVR

= the map Appendix J exhibit 5.8-1 doesn't reflect LO, LO is NOT a "grid street community". Many streets do not go through. This makes for great neighborhoods.

= A detailed map which indicates which steets go through should be given to the workers of the LOWWP.

= It appears that the problem may have come from Associated Transportation Engineers study dated 10/7/08 (Appendix J - p. 46)

comment page 5.2-3

"Seawater intrusion in lower aquifer E Zone... is approximately located between Broderson Avenue and Palisades Avenue."

= won't the addition of water at Broderson Ave. push the salt water further inland? P11-37

comment page 5.3-4 "Thresholds of Significance"

= I don't see the question asked: would the project substantially alter the existing drainage pattern, so that it would destroy habitats by "drying up" an area? P11-38

comment page 7-23 Table 7-5: Screening of Collection System Alternatives under Gravity " Least ex-filtration "

= this appears to conflict with appendix A, p 55 & 56 of 140 which indicates STEP is better for this important point P11-39

= and what about a vacuum system?

//

comment page 6-2
= Please review Table 6-2 Buildout Population and Housing Data for Inside and Outside the RWQCB Prohibition Zone in the Community of Los Osos,
and the paragraph before Table 6-2 against your references sited under Table 6-2.

* eg. the figures in your paragraph and table do not reflect the information in the references under Table 6-2 and the references are not complete!

(I have listed & included some attachments for your convenience.)

* information from reference "a: Draft Environmental Impact Report for the Los Osos Community Services District, Wastewater Facilities Project, Page 61, November 2000": (*see attachment 2*)
= These tables use the Urban Reserve Line as the focus boundary and the RWQCB Prohibition Zone/collection Area (87% of Urban Reserve Line) is listed as 17,963; (on following page there is more explanation "the collection area is approximately 78% of the total area within the RWQCB Prohibition Zone"... "and about 47% of the area within the Urban Reserve Line for Los Osos".....)
= this document says total population at buildout to Urban Reserve Line is 20,590 (check this information against your table!) (I am attaching an Estero Map to show the URL. line with the LO Urban Neighborhoods) (*see attachment 3*)
NOTE: the maps in the Estero area document use the Urban Reserve Line as the main boundary for LO.

P11-40

AND continue reading to see that Estero Plan may be saying 19,713. for total buildout (or 17, 334!)

The confusion of past documents gets compounded by using outdated, incomplete or incorrect figures!

* information from reference "b: Based on the remaining population after the buildout population within the RWQCB prohibition zone is subtracted from the total buildout population in the Community of Los Osos".
= the number 28,688 used in your table is the absorption number, not the buildout number, and therefore your data is miscalculated. see reference "c" below

* information from reference "c: Land Use Element of the San Luis Obispo County General Plan, Estero Area Plan, Page 2-15, (Approved November 2004 and Amended July 2006)".

28,688 is from Table B - Absorbtion Capacity Estero Planning Area" (*attachment 4*) (for a better understanding here is a definition from a previous Estero Area Plan: "projected absorption capacity, which is the potential planning area population resulting from unconstrained growth and fully-occupied development to the maximum permitted in each land use category. (framework for planning offers a more detailed discussion of absorption capacity)"

AND

Table A, "Population Projections Estero Planning Area", has been replaced by Table 2-5 "Estimated Growth & Buildout". (see page 2-14 of Estero Area Plan Update)
Los Osos is missing from Table 2-5: Estimated Growth and Buildout (*see attachment 5*)
It is my understanding that it was because Los Osos is waiting for its Habitat Conservation Plan.

IN FACT:

There was a complete Table 2-5 "Estimated Growth & Buildout" on p 2-22 of the Estero Area Plan Update Jul 2004 of the Planning Commission - Recommended Plan which indicated that the LO buildout was 19,713. (*see attachment 6*)
AND
In the Estero Area Plan revised 2002, the Los Osos population was listed as even less: 17,334.

P11-40
CONT

* information from reference d. "Based on 2.32 persons per housing unit which is the combined average persons per housing unit that occurred in 1990 and 2000 in the Community of Los Osos, as described above and rounded to the nearest hundred."

= if the other figures were wrong in your table and also used for this calculation, then this calculation is wrong too!

= another observation: because of the hard economical times, people may share a house so the figure 2.32 (persons per housing unit) may also change.

Two of the elements that control growth are the amount of water and the capacity to treat sewage. Too many people can destroy the very special area next to a National Estuary which is located on the Pacific Flyway which wildlife, birds and people (including visitors) depend upon. I have a concern with the documents which project an dramatic increase in population without proper consideration.

comment page 8-2

"The environmental issues that were determined not to be significantly affected by the proposed project and therefore, do not require evaluation in the document, per section 15063(c) of the State CEQA Guidelines, are as follows:• Mineral Resources • Population and Housing (Displacement of Substantial Numbers of Existing Housing and People)" and referring to Tonini

"Because only one dwelling is affected, the project will not displace substantial numbers of existing housing or persons. Therefore, impacts associated with the displacement of persons and housing are considered less than significant. "

= the cost of the sewer, if not drastically lowered, will displace a significant number of people.

The 218 vote that passed for $25,000 per house is misleading. Some people, even though they couldn't afford it, voted yes to appease the Water Board and to get the county to take over the project from the bankrupt CSD. If the cost is not substantially lowered MANY PEOPLE will have to move.

P11-41

comment: Appendix P, page 6

"Agricultural Reuse: Agricultural reuse consists of using treated secondary or tertiary effluent to irrigate agricultural crops. The agricultural land irrigated with recycled water can be managed to maximize disposal of water by increasing the crop density and/or planting crops with high evapotranspiration potential, such as grasses for forage that can be irrigated year-round. "

= The above definition's emphasize is disposal, not recharge! I thought that the reason for agricultural reuse was to replace the current amount of water that farmers were using from the lower aquifer with our treated water. The above definition indicates a change of crop which would not only affect the commodity market, but also use up more of our water, without saving the lower aquifer.

P11-42

General Comment:
It appears that when we boil all of this down that this is really a water management project located in a very complex geological area. It would seem that the best approach would be to look at a complete package, the wastewater project and the water reuse project together, instead of adding a water package on later. This may save costly economical or environmental mistakes or duplication of efforts. A "dividing line" could be agreed upon to handle the cost issues. Hopefully the county and water purveyors will get together soon and come up with a good plan! P11-43

two examples, of where everyone needs to get together **now** before we start anything:

comment: if the treatment plant is out of town and if the Mid-Town site is chosen for Urban Reuse on a large scale (Mid-Town site ideas on page 5 of this document) then the Mid-Town pump station (used to pump all waste out of town) should possibly be at the corner of So. Bay & LOVR instead of at the Mid-Town site. P11-44

comment page 8-2 (under SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES)
" Land devoted to treatment facilities would be permanently committed to supporting urban uses. Treated effluent, spray field, and leachfield areas would be permanently committed to disposal of treated effluent."
= We need to unite & decide what we want to do "permanently" before this happens! (hopefully my comments have generated some disposal/reuse ideas) P11-45

With any project there will be a lot of change and to determine if we are on the right path all we need is do is ask: will the end result be better than what currently exists for people and nature?

Thank you for considering my input,
Marie Smith
Los Osos

Attachment 1

INTRODUCTION

Scenic Way is a residential street which lies in an interdunal depression at the northeastern boundary of Baywood Park. During prior investigation of treated wastewater disposal sites, Scenic Way was identified as an area of potential concern for rising water attributable to treated wastewater disposal (Wastewater Disposal Sites Evaluation, Cleath & Associates, October 2001). A Harvest well was tentatively proposed for the area, as noted in the October 2001 report (page 23):

> *The Harvest well on Scenic Way would be beneficial if shallow perching clay beds are not present and would be recommended if a more detailed understanding of the ground water conditions in that area verifies its effectiveness...otherwise, a shallow subsurface cut-off drain may be required.*

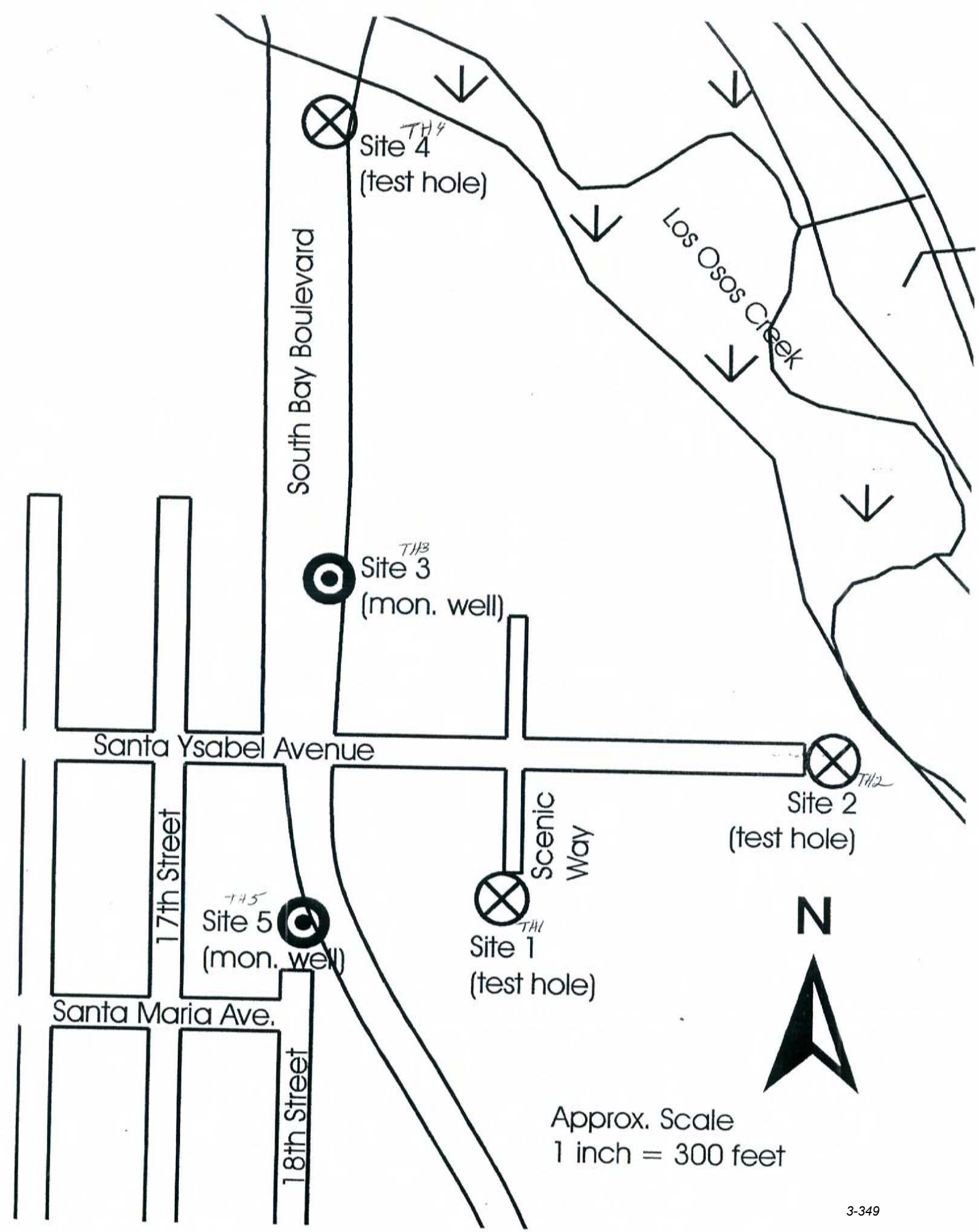
The concern for rising water was based on two drilling logs from private wells that reported sandy brown clay at 10-65 feet and 10-53 feet depth at the south end of Scenic Way. Other nearby logs, however, indicate that the dune sands along Scenic Way should extend significantly deeper. The current investigation was designed to characterize the subsurface lithology, provide data for evaluating ground water mounding under wastewater project conditions, and to include construction of monitoring wells for use in treated wastewater disposal operations.

DRILLING AND WELL CONSTRUCTION

Five test holes, TH1 through TH5, were drilled by S/G Drilling under Cleath & Associates' supervision between March 25 and April 2, 2003 (Figure 1). The test holes were advanced with 8-inch diameter hollow-stem auger, and sampled using standard geotechnical methods at five-foot intervals. Lithologic logs of the test holes are in Appendix A. Selected samples were analyzed for grain size and permeability by Fugro West, Inc (Appendix B).

TH1 was drilled on the southern cul-de-sac of Scenic Way, where private residences in a local topographic depression are the primary concern for rising water impacts. TH2 and TH4 were drilled at the perimeter of the ground water basin along Santa Ysabel Avenue and South Bay Boulevard, respectively. These test holes intercept Franciscan Formation metavolcanics at depth. Test holes TH3 and TH5 were drilled adjacent to future treated wastewater disposal areas, and were converted to monitoring wells for future use during disposal operations. TH3 (Well 30S/11E-8Ma) is located at the south end of a future disposal site on South Bay Boulevard, while TH5 (Well 30S/11E-8Mb) is located near the northeast end of a future disposal site on Santa Maria Avenue/18th Street.

The monitoring wells are completed with 2-inch diameter PVC with 10 feet of well screen (0.020-inch slots) set at the water table. The wells are constructed for the purpose of monitoring the development of ground water mounding associated with future treated wastewater disposal. The wells are permitted


Site 4
TH4
(test hole)
South Bay Boulevard
Los Osos Creek
Site 3
TH3
(mon. well)
Santa Ysabel Avenue
Site 2
TH2
(test hole)
Scenic Way
17th Street
Site 5
TH5
(mon. well)
Site 1
TH1
(test hole)
N
Santa Maria Ave.
18th Street
Approx. Scale
1 inch = 300 feet

3-349

- Programs aimed at facilitating coordination among agencies and organizations involved in management and conservation/preservation of sensitive resources, including USF&WS, CDFG, California Coastal Commission, San Luis Obispo County, the LOCSD, MEGA, NEP, Land Conservancy of San Luis Obispo County, and others;
- The creation of a landbank program to facilitate the purchase of properties with high quality habitat within the Greenbelt, to be repaid over time from fees on new building permits;
- Programs for the acquisition of properties within the Greenbelt with significant habitat resources;

Population and Estimated Wastewater Flows

Population

The design capacity of the proposed wastewater treatment system is based on population projections and calculated flows for the service area in the year 2020. Population projections for the community have been calculated by various entities over the years, including the SWRCB (1982-2007), the County of San Luis Obispo (*Draft Estero Area Plan*, 2000), and members of the LOCSD Wastewater Committee. The population served by the proposed system is summarized on Tables 3-5 and 3-6.

Table 3-5: Buildout Estimate and Adjustments Within The Urban Reserve Line
Source: LOCSD and Montgomery Watson Americas, 2000

Buildout Population of Collected Area:	19,306
Buildout Population of Uncollected Areas:	2,628
Sub-Total:	21,934
Adjustments:	
Morro Palisades (204 acres)	-1,325
Broderson (north 40 acres)	-18
Total:	20,590

Table 3-6: Summary of Population Served By the Wastewater Facilities Project
Source: LOCSD, 2000

Area	Population At Buildout	Percent of Urban Reserve Line
Urban Reserve Line	20,590[1]	100%
Adjustment for Uncollected Areas:	-2,628	13%
RWQCB Prohibition Zone/Collection Area	17,963	87%

1. See Table 3-5.

The collection area is approximately 78% of the total area within the RWQCB Prohibition Zone (see Figure 3-2) and about 47% of the area within the Urban Reserve Line for Los Osos. Areas within the Prohibition Zone with lot sizes of one acre or more are excluded from the collection system. These areas include the Martin Tract, which surrounds Monarch Grove Elementary School, and Bayview Heights, which lies south of Los Osos Valley Road. In addition, the Monarch Grove subdivision has been excluded from the collection system because it has its own package treatment plant.

Wastewater Flows

Based on the population described above in Table 3-5, wastewater flows were estimated as follows:

Dry Weather Flow:	1.365 million gallons per day
Estimated Savings from Water Conservation Program:	0.150 mgd
Adjusted Average Dry Weather Flow:	1.200 mgd
Peak Wet Weather Flow:	1.700 mgd

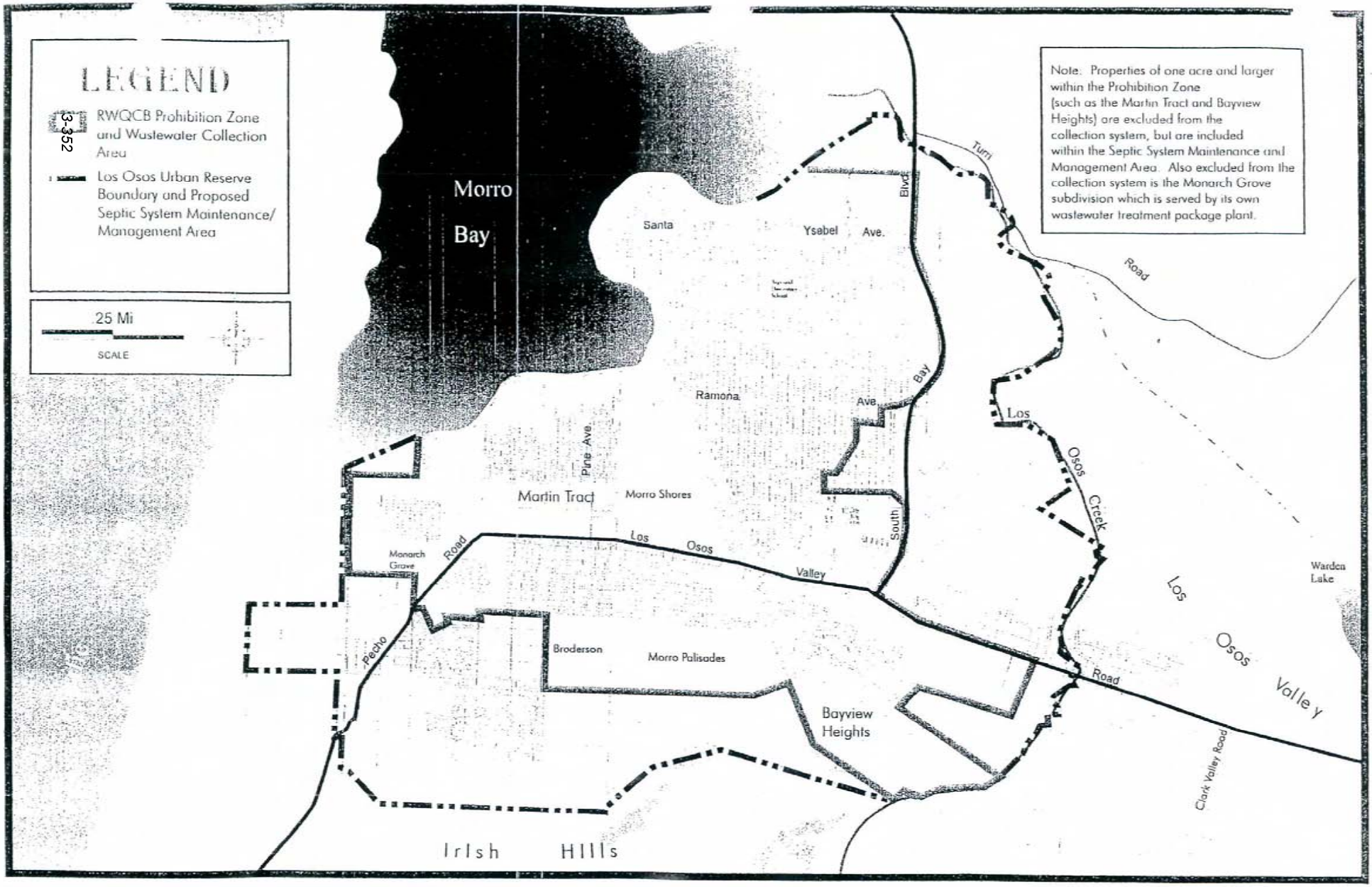
Supporting Public Services

Public services necessary to construct, operate and maintain the facility include water and electric power; fire and police protection services may be also required in the event of an emergency. Water used by the facility will be minimal. Electric power is currently provided to the community by a number of companies. Reliance on police services is expected to be minimal. Fire service is located nearby, but due to the nature of the facility, would rarely be summoned.

Reasonably Foreseeable Future Phases

This project is designed to serve the 2020 buildout population of the Los Osos area as envisioned by the Estero Area Plan. Although future phases may be necessary, the project incorporates reasonable estimates of long-term growth and is considered cumulative. In the future it may be necessary (or desirable) to collect septic tank effluent from areas outside the Prohibition Zone adopted by the RWQCB, such as Cabrillo Estates. For this reason, the collection system is being designed so that it can be readily extended to these areas if necessary in the future.

Another option being considered for future phases of the Wastewater Facilities project is the recycling of bio-solids for re-use as a soil amendment as an alternative to hauling. Under this alternative, treated sludge would be removed from the Wastewater Treatment facility about three times per week and hauled to bio-solids recycling center where it would be combined with green-waste (organic mulch) and allowed to decompose. The bio-solids recycling facility would consist of about four acres and would contain a two-acre covered concrete pad and support facilities as illustrated by Figure 5-11.



3-352

LOS OSOS COMMUNITY SERVICES DISTRICT
WASTEWATER FACILITIES PROJECT

Figure 3-2
Wastewater Collection Area & Proposed Septic System Maintenance and Management District

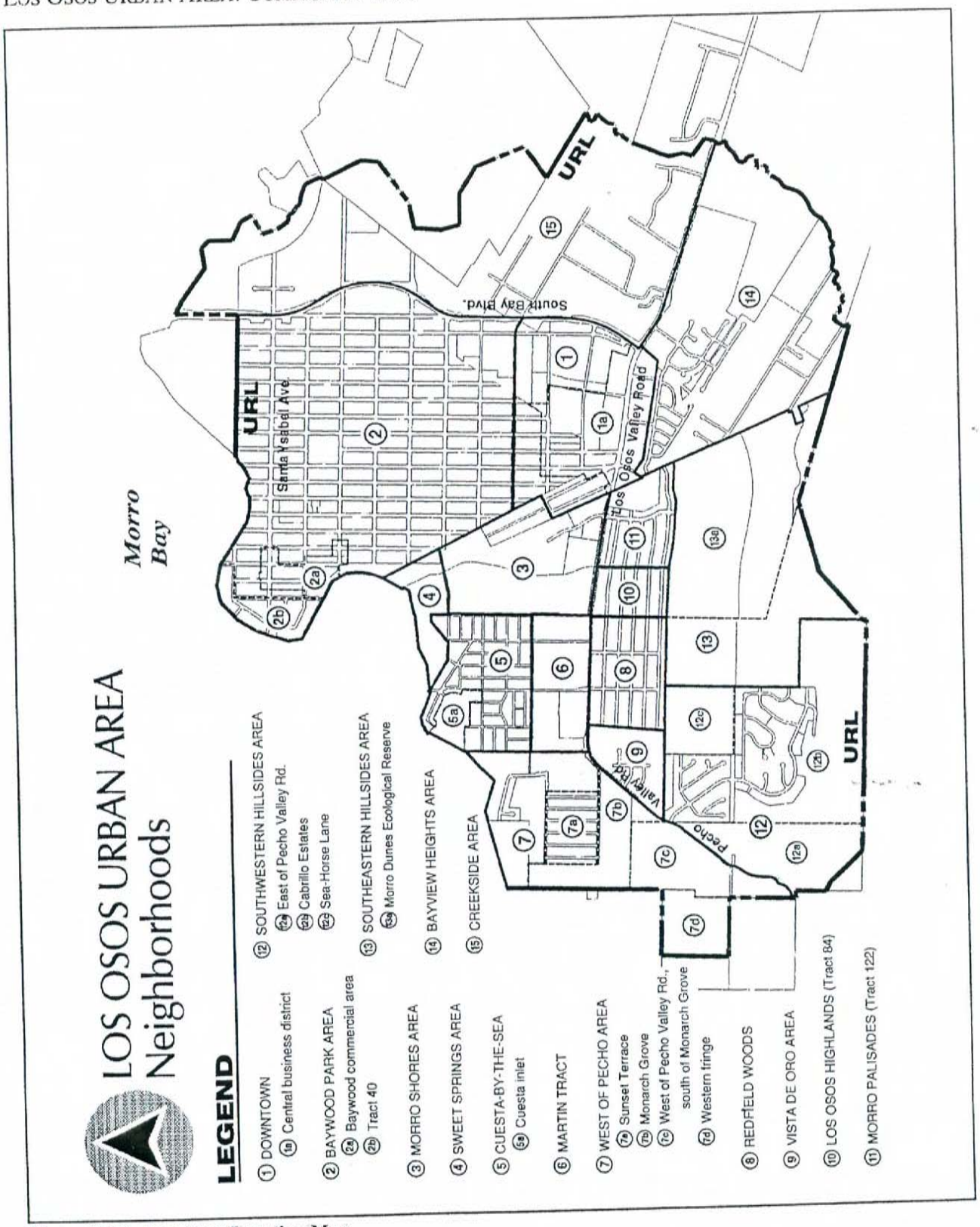


Figure 7-37: Los Osos Location Map

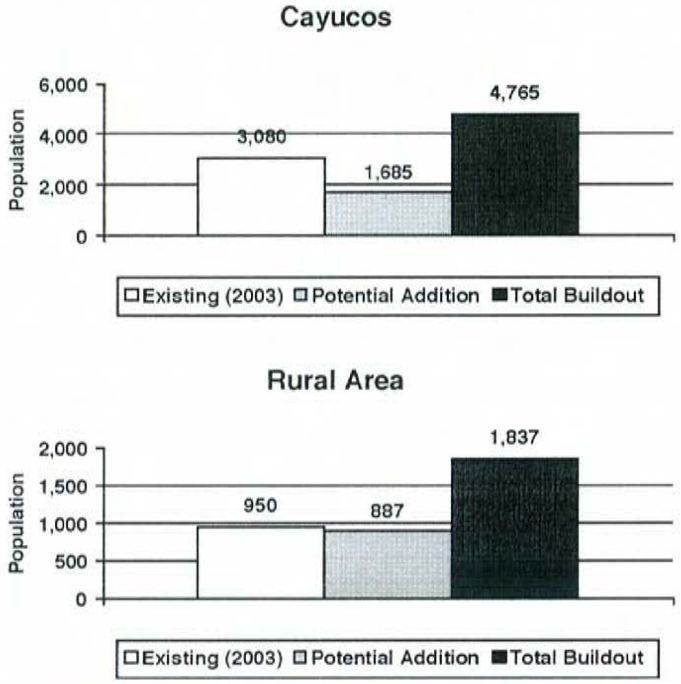
TABLE B – ABSORBTION CAPACITY[1] ESTERO PLANNING AREA				
Land Use Categories	~~**Rural Area**~~	~~**South Bay**~~ **Los Osos**	~~**Cayucos**~~	~~**Total**~~
Agricultural	~~1,900~~			~~1,900~~
Rural Lands	~~94~~			~~94~~
Residential Rural	~~104~~			~~104~~
Residential Suburban	~~280~~	1,956		~~2,236~~
Residential Single-Family		19,416	~~2,791~~	~~22,207~~
Residential Multi-Family		5,796	~~2,678~~	~~8,474~~
Office and Professional		1,512	~~171~~	~~1,685~~
ABSORPTION CAPACITY	~~2,378~~	28,688	~~5,642~~	~~36,708~~
Existing Population	~~852~~	~~20,381~~ 14,440	~~2,292~~	~~13,525~~
POTENTIAL ADDED POPULATION	~~1,526~~	~~18,307~~ 14,248	~~3,350~~	~~23,183~~

1 Potential population at building by land use category.

~~2 Does not include population of city of Morro Bay (8,876 in 1980).~~

attachment 5

Figure 2-7: Existing Population and Theoretical Potential at Buildout



~~Table A – Population Projections Estero Planning Area~~						
~~Year~~	~~Rural Area~~	~~South Bay~~	~~Morro Bay~~	~~Cayucos~~	~~Planning Area~~	~~% of County~~
~~1979~~	~~832~~	~~9,593~~	~~8,685~~	~~2,223~~	~~21,333~~	~~14.74~~
~~1980~~	~~852~~	~~10,381~~	~~8,876~~	~~2,292~~	~~22,401~~	~~14.96~~
~~1985~~	~~960~~	~~12,630~~	~~9,896~~	~~2,531~~	~~26,017~~	~~15.38~~
~~1990~~	~~1,080~~	~~14,220~~	~~10,926~~	~~2,775~~	~~29,001~~	~~15.63~~
~~1995~~	~~1,216~~	~~15,700~~	~~11,940~~	~~3,001~~	~~31,857~~	~~15.74~~
~~2000~~	~~1,369~~	~~17,334~~	~~13,047~~	~~3,246~~	~~34,996~~	~~15.88~~

Table 2-5: Estimated Growth and Buildout[1]

AREA	2003	2005	2010	2015	2020	2022
Cayucos	3,080	3,220	3,610	4,050	4,530	**4,765 buildout in 2022[2]**
Rural	950	990	1,110	1,250	1,400	**1,460**
						1,837 buildout in 2031[4]

1 Population estimates assume 2.3% annual growth rate,
2 Buildout estimate for Cayucos assumes 9.3% vacancy for existing development, 5% vacancy for future development, 2.09 persons per occupied dwelling unit
4 Buildout estimate for the Rural area assumes 100% occupancy and 2.67 persons per occupied dwelling unit

Attachment 6

Table 2-5: Estimated Growth and Buildout

AREA	2003	2005	2010	2015	2020	2022
Cayucos	3,080	3,220	3,610	4,050	4,530	4,765 buildout in 2022[2]
Los Osos	14,440	14,520	16,260	18,220	19,713 buildout in 2018[3]	19,713
Rural	950	990	1,110	1,250	1,400	1,460 1,837 buildout in 2031[4]
Planning Area	18,470	18,730	20,980	23,520	25,530	25,800 26,315 buildout in 2031

1 Population estimates assume 2.3% annual growth rate, except in Los Osos: assume 0.20% total population growth between 2002 and 2005 (the same rate as between 1997 and 2002); 2.3% per year thereafter

2 Buildout estimate for Cayucos assumes 9.3% vacancy for existing development, 5% vacancy for future development, 2.09 persons per occupied dwelling unit

3 Buildout estimate for Los Osos assumes 100% occupancy and 2.44 persons per occupied dwelling unit

4 Buildout estimate for the rural area assumes 100% occupancy and 2.67 persons per occupied dwelling unit

Marie Smith, January 26, 2009 (Letter P11)

Response to Comment P11-1

This comment expresses a concern about water resources issues and seawater intrusion into the lower aquifer. Specifics of the groundwater conditions, remediation measures and other details are contained in Section 5.2, Groundwater Resources, and in Appendix D-1, Expanded Groundwater Resources Analysis. The concerns expressed in this comment are addressed in those sections. Further discussion of water resources issues is also addressed in the Topical Response 3, Water Resources and the Project Scope.

Response to Comment P11-2

This comment is concerned with a spelling error. The referenced sentence is on page 3-8 of the Draft EIR is revised as follows:

> On March 27, 2007, the County Board of Supervisors certified a "Level of Severity (LOS) III for the community of Los Osos while adopting a Resource Capacity Study of the Los Osos groundwater basin.

Response to Comment P11-3

This comment refers to a repetition in Section 2 of the Draft EIR. The referenced entry is in Section 2, Acronyms and Abbreviations, on page xi of the Draft EIR is revised as follows:

> NI = No Impact
>
> ~~NI = No Impact~~
>
> RWQCB = Regional Water Quality Control Board
>
> ~~RWQCB = Regional Water Quality Control Board~~

Response to Comment P11-4

This comment refers to a repetition in Section 2 of the Draft EIR. The referenced entry is in Section 2, Acronyms and Abbreviations, on page e ix of the Draft EIR is revised as follows:

> AFY acre-feet per year
>
> AF Acre-feet
>
> ~~AFY acre-feet/year~~

Response to Comment P11-5

This comment is concerned with an unfinished sentence. The referenced sentence is on page 2-41 of the Draft EIR and is revised as follows:

5.6-B6 Preconstruction monitoring shall occur in areas ranked as high in sensitivity for buried deposits. Two such areas have been identified within the proposed project area: (1) along Los Osos Valley Road from Los Osos Creek east to the Cemetery Parcel; and (2) in the western portion of the Tonini Parcel. Mechanical backhoe trenching shall be conducted within the sensitive areas where any construction impacts will occur and shall be monitored by a qualified geoarchaeologist. Any identified intact deposits will be evaluated, and any deposits determined to be eligible to the California Register and/or National Register shall require project redesign to avoid impacts, or data recovery to mitigate unavoidable impacts.

Response to Comment P11-6

This comment refers to a typographic error. The referenced sentence on page 2-41 of the Draft EIR is revised as follows:

5.6-B5 ~~H~~ Historic-era ranch/farm complexes may contain intact artifact deposits from early periods of occupation (in privies, trash pits, wells, etc.).

Response to Comment P11-7

This comment refers to a mislabeled table. The referenced table on page 5.5-1 of the Draft EIR is revised as follows:

Table 5.5-1: Biological Resources ~~Proposed Mitigation Measures Significance~~ Determination

Response to Comment P11-8

This comment refers to a wording error. The referenced sentence on page 5.8-2 of the Draft EIR is revised as follows:

Based on a review of the County of San Luis Obispo General Plan, there ~~are~~ is one goal and one policy that address traffic and transportation related issues. These are presented below.

Response to Comment P11-9

This comment refers to an incorrect table reference. The referenced sentence on page 7-49 of the Draft EIR is revised as follows:

Table 7-6 ~~below~~ provides a summary comparison of the wastewater treatment process alternatives against the project selection criteria.

Response to Comment P11-10

This comment refers to a wording error. The referenced sentence on page 7-65 of the Draft EIR is revised as follows:

All four proposed projects assume a 46-acre foot storage pond.

Response to Comment P11-11

This comment suggests that Table 7-7 on pages 7-47 and 7-48 be modified to include biosolids removal comparisons. Table 7-7 concerns wastewater treatment processes, not biosolids. Biosolids processing and disposal options are discussed in Section 7.3.6, Biosolids Processing and Disposal, on pages 7-49 through 7-54 and page 7-57.

Response to Comment P11-12

This comment expresses a concern that the table row in Table 7-6 entitled "Costs" is mislabeled. The primary cost differences between the wastewater treatment plant sites are construction-related such as higher costs to mitigate geotechnical hazards, choosing a more costly treatment technology such as MBR to fit the treatment plant on a smaller site, or having to purchase more than one or two parcels to fit all the facilities on the project site.

Response to Comment P11-13

This comment noted that Exhibit 4-1 in the Draft EIR does not show the surrounding greenbelt (i.e., Morro Dunes Ecological Preserve). Exhibit 4-1 provides a general environmental setting in the project area. Specific ecological areas (i.e., sensitive resource areas [SRA] and environmental sensitive habitat areas [ESHA]) are depicted in Exhibit 5.5-3 in Section 5.5, Biological Resources, in the Draft EIR.

Response to Comment P11-14

This comment recommends language be added to educate readers that microorganisms work in the soil to help decompose nitrates from treated wastewater applied to soils. Comment is noted.

Response to Comment P11-15

This comment expresses a concern about where pollutants occur in the groundwater and which aquifer is used for most potable water use by the Los Osos community. The referenced section is 1.2.2, Regulatory Oversight, and is in the Introduction to the Draft EIR. As such, the Introduction is general in nature and does not include detailed discussion or impact analysis. Detailed discussion and analysis of the aquifers, contamination by leaking septage and other water pumping issues are discussed in Section 5.2, Groundwater Resources, and in Appendix D-1, Expanded Groundwater Quality Analysis. The concerns expressed in this comment are addressed in those sections.

Response to Comment P11-16

This comment states that treated water may need to be returned to the upper aquifer in order to prevent groundwater degradation. See Topical Response 3, Water Resources and the Project Scope, and the Project Scope, Topical Response 8, The Broderson Leachfield, and Response to Comment A8-85.

Response to Comment P11-17

This comment expresses concern of whether there would be sink holes (subsidence) or settling of buildings due to the removal of existing septic tank water from the Prohibition Zone area. Based on previous geotechnical investigations, the majority of the collection system is underlain by sand dune deposits that are generally granular. Granular soils are typically regarded as having a low potential for subsidence due to dewatering.

In addition, previous drainage studies within the Prohibition Zone identified that groundwater levels rose in response to development and specifically on-site disposal. This means implementation of the proposed project would result in groundwater levels returning to historic levels, and the soil has experienced these groundwater levels previously. Soils remember their past loading cycles, and would not be overly compressible when those cycles are repeated. Since these soils would not be dewatered for the first time, less than significant subsidence impacts would occur.

Response to Comment P11-18

This comment expresses a concern regarding the preservation of the wetlands. The wetlands mentioned in the LOWWP Draft EIR Exhibit 5.5-2 have not been studied in enough detail to determine if the loss of water from the existing septic system would significantly impact the wetlands. See Response to Comment A8-9 for details on monitoring activities associated with potential groundwater changes. The comment concerning people being able to build closer to the estuary and the wildlife corridors adjacent to the estuary as a result of the changes from the project are beyond the scope of this document.

Response to Comment P11-19

This comment expresses concerns about water resource issues; specifically the causes of seawater intrusion, costs to correct the problem should be borne by all that use the aquifers, and that water purveyors need to be involved now in the solution. The commentor correctly observes that the primary purpose of the LOWWP is to address and build the wastewater project to serve the Los Osos community. The County has identified numerous secondary goals for the project as well, including addressing the issue of saltwater intrusion. The County is taking cooperative steps to coordinate efforts with the water purveyors to further the goal of efficient water use, conservation, and to halt saltwater intrusion to the lower aquifer. See also Topical Response 3, Water Resources and the Project Scope.

Response to Comment P11-20

This comment expresses the opinion regarding tertiary treatment and urban reuse. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P11-21

This comment expresses a concern regarding habitat destruction. The object of Mitigation Measure 5.5-A15 is not to alter existing habitat. The Broderson site used for mitigation for impacts associated with the Los Osos Waste Water Project, must meet habitat requirements for species that would be impacted by construction and operation of the facility.

The comment with regard to exchanging adjacent land that is already full of veldt grass to build a disposal site presumably is aimed at the use of the Mid-town site for disposal instead of the Broderson site. Conditions for disposal at the Mid-town site are not similar and would not meet the needs of the project.

Response to Comment P11-22

This comment expresses concern that hikers, runners, and horseback riders south of the current terminus of Broderson Avenue would be prohibited from using the trail south of Broderson Avenue. Based on a review of the Estero Area Plan, the area along Broderson and south of the current terminus of Broderson is not currently a designated trail for hikers, runners, and horseback riders.

Response to Comment P11-23

This comment expresses several concerns with the Broderson leachfields including consideration of water seeps from rainfall uphill of the leachfield and what happens if heavy rainfall coincides with the leachfield getting plugged, periodic leachfield reconstruction, or an earthquake. Several project design features would address these questions:

1. Treated effluent could be stored for the duration of a heavy rainstorm or longer in the Tonini wet weather storage ponds if site conditions at the Broderson leachfield prevented its use.
2. After an earthquake, treated effluent could be stored in the Tonini wet weather storage ponds or sent to the Tonini sprayfields.
3. The Broderson leachfield will be constructed of several smaller leachfields so that only one leachfield at a time would be out of service for maintenance.
4. The low planned effluent discharge rates (4 percent of the maximum potential infiltration rate) will avoid impacts with existing stormwater and groundwater at Broderson.
5. The LOWWP team will develop and implement a Stormwater Management Plan (SWMP) and SWPPP for the project operations and construction phases respectively as described in Topical Response 11, Construction and Post-Construction Stormwater; and Topical Response 12, Sewer System Management Plan.

The Broderson leachfield technical assessment, design and operational issues are discussed in greater detail in Draft EIR Section 3.3.2, Proposed Projects, subheading Effluent Disposal; Topical Response 8, The Broderson Leachfield; Draft EIR Appendix D-1, which is the Expanded Groundwater Resources Analysis; Draft EIR Section 7.3.7, Effluent Disposal and Reuse Facilities; and the Effluent Reuse and Disposal Alternatives Technical Memorandum (April 2008).

Response to Comment P11-24

This comment expresses a concern regarding excavating the leachfields every 5 to 10 years. See Response to Comment A8-29 regarding the reconstruction of the Broderson leachfield every 5 to 10 years.

Response to Comment P11-25

This comment expresses a concern regarding the preservation of night sky viewing. See Topical Response 4, Tertiary Treatment, regarding the different reuse options of treated effluent. The second point expresses concern over lighting (presumably) at the Broderson leachfield. Night lighting would not be required at the leachfield. Security lighting would be present at the treatment plant, but would be shielded and directed downward.

Response to Comment P11-26

This comment expresses a concern regarding the identification of alternative paths to the lower aquifer. To varying degrees, any effluent placed above the Los Osos Aquifer will provide groundwater benefits. As described in detail in Section 5.2 and Appendix D of the EIR, the efficiency with which that discharge benefits the aquifer (upper and lower) varies with location. Broderson and Morro Palisades to the east (which is unavailable as it is designated open space) have the highest efficiency (at about 20 percent) while sites near the Bay have the lowest efficiency (near 0). Overall, the dune sands underlying the community have about a 10 percent efficiency of returning percolated effluent to the lower aquifer.

Response to Comment P11-27

This comment asked why the project does not include injection wells and if they are added in the future would another EIR be required. The Fine Screening Report evaluated the potential for injection wells; however, the County determined not to include them as part of the proposed project (see Topical Response 3, Water Resources and the Project Scope). If injection wells are proposed in the future, additional environmental review and documentation in accordance with CEQA would be required.

Response to Comment P11-28

This comment expresses a concern regarding the air quality significance determination under the treatment option. Section 5.9 of the Expanded Analysis on pages 5.9-49 through 5.9-61 discuss impacts 5.9-D (sensitive receptors) and 5.9-E (odors).

Response to Comment P11-29

This comment expresses an opinion regarding the potential lost revenue associated with using the Tonini parcel as a disposal site. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P11-30

This comment expresses a concern that the type and size of the parcel are important in the determination of the environmentally superior alternative. Section 7.2 of the Draft EIR includes a discussion of steps in the alternative screening process.

Response to Comment P11-31

This comment expresses a concern that prime agricultural land is being used under the proposed project. Section 7.0 of the Draft EIR includes a discussion of alternatives to the proposed project.

Response to Comment P11-32

This comment is concerned that grass grown at the sprayfield would be disposed of at a landfill. The project includes harvesting grass at the sprayfields and hauling the harvested grass to a landfill. The project does not prevent the potential for harvesting the grass for use, if desired in the future. See Response to Comment A5-3 for more information on the requirements associated with the vegetation on the sprayfields.

Response to Comment P11-33

This comment poses several questions regarding the Tonini site. The following responses are made in the order of those questions: The wastewater project (that is, those served by the project as represented by the County) will own the land at Tonini. Grazing leases, farming leases, or any other income producing use of the land will return any profits to the wastewater project. Land ownership also includes rights to underlying groundwater. The Williamson Act provides for the termination of a land conservation contract when the land is used for public purposes only under specific circumstances (essentially, the site is not being chosen because of a lower property value attributable to the conservation contract and the agency finds there is no feasible alternative). Growth is controlled by the size of the treatment plant, the size of the prohibition zone, and numerous statutes and regulations, including the California Coastal Act, that require an open public process to occur before the treatment plant could be expanded to accommodate growth outside the current service area (prohibition zone). The treated effluent is owned by the wastewater project, much the same as the land. If the sale, disposal, or reuse of that water provides economic benefits, those benefits would flow back to the project.

Response to Comment P11-34

This comment expresses concern that Turri Road is not adequate to accommodate truck traffic particularly adjacent to Los Osos Creek. Due to the undulating terrain along Turri Road between South Bay Boulevard and the Tonini site, the majority of construction traffic and long-term traffic associated with the operation and maintenance of the LOWWP, truck traffic would access Turri Road via Los Osos Valley Road. Based on this assumption, Section 5.8 in Appendix J-1 evaluated the existing capacity of Turri Road north of Los Osos Valley Road as well as the level of service at the Turri Road/Los Osos Valley Road intersection.

Response to Comment P11-35

This comment expresses a concern regarding access for the LOWWP disposal site. See Response to Comment P11-34 regarding long term truck traffic for operation and maintenance of LOWWP.

Response to Comment P11-36

This comment states that 9th and 10th Street are not through streets. See Response to Comment P10-15 regarding 9th and 10th Streets between Los Osos Valley Road and Santa Ysabel Avenue.

Response to Comment P11-37

This comment expresses a concern regarding saltwater intrusion at the Broderson site. The Broderson leachfield discharge will percolate through the thin dune sand layer and into the upper aquifer Zone C where it will recharge across the basin within that zone. Leakage from the Zone Centers the underlying Zone D of the lower aquifer system that subsequently leaks into the underlying Zone E. The dispersed nature of the leakage over the toe of the seawater intrusion wedge will not divide the saltwater plume like the direct injection from a well. While the Broderson discharge will offset the amount of lost groundwater recharge from septic system discharges and replace this component of lower aquifer system recharge, it will only abate seawater intrusion potentially caused by the LOWWP and is not designed to fully abate seawater intrusion caused by historical over pumping of the lower aquifer system.

See Topical Response 3, Water Resources and the Project Scope.

Response to Comment P11-38

This comment expresses a concern that there is no threshold to address the question, "Would the project alter the existing drainage pattern, so that it would destroy habitats by "drying up" an area?" A discussion under Impact 5.3-C on page 5.3-43 of the Expanded Analysis includes a analysis of the project potential drainage pattern as well as impacts resulting from flooding.

Response to Comment P11-39

This comment expresses a concern that the statement in Table 7-5 conflicts with a statement in a response to the LOWWP Notice of Preparation (NOP) that was prepared by a group of several local environmental groups and is included in the Draft EIR Appendix A with the other NOP responses. Exfiltration issues and project design criteria to minimize exfiltration are discussed in Topical Response 10, Infiltration, Inflow, and Exfiltration, the Draft EIR Appendix B, and Section 4.0 of the Flows and Loads Technical Memorandum. The key to maintaining the water tight status of the collection system, whether it is a gravity collection system or a STEP/STEG system, is implementing a Sewer System Management Plan as described in Appendix Q, Preferred Project Evaluation, and in Topical Response 12, Sewer System Management Plan.

Response to Comment P11-40

This comment is concerned that the Table 6-2 in the Draft EIR does not reflect the correct population estimate within the Prohibition Zone area. The reference to the 19,306 figure includes all areas within the Prohibition Zone including those areas that have been excluded in Table 3-5 in the 2000 Draft EIR for the Wastewater Facilities Project. The second paragraph on page 6-2 of the Draft EIR provides a discussion of the areas that have existing wastewater systems serving tracts of homes.

This comment also expresses concern that an incorrect buildout figure for the Community of Los Osos is provided in Table 6-2 in the Draft EIR. As referenced in footnote, the buildout figure of 28,655 is based on the Estero Area Plan that was amended on July 18, 2006. The information that is referenced in the comment is based on outdated versions of the Estero Area Plan.

Finally, this comment is concerned that the persons per housing unit were incorrect and stated that because of hard economic times, people may share a house. The persons per housing unit is an average for a future projected population and is not based on a specific economic cycle that the community may be currently experiencing.

Response to Comment P11-41

This comment expresses a concern regarding the possibility of displacement as a result of the costs associated with the proposed project. See Topical Response 1, The Proposition 218 Election, and Topical Response 2, Project Costs regarding the overall project costs.

Response to Comment P11-42

This comment asked if the disposal option of agricultural reuse is for disposal or recharge. The purpose of the agricultural reuse is for disposal; however, this reuse would cause a reduction of water pumped from the groundwater.

Response to Comment P11-43

This comment expresses a desire to find the best approach to look at the wastewater project and the water reuse project together as a whole. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P11-44

This comment states that if the treatment plant is out of town and if the Mid-town site is chosen for Urban Reuse on a large scale then the Mid-town pump station should possible be at the corner of So. Bay and LOVR instead of at the Mid-town site. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P11-45

This comment expresses a concern regarding land devoted to treatment facilities being permanently committed. The proposed project includes the development of infrastructure for a wastewater collection, treatment and disposal system. These facilities would remain for the life of the project.

RECEIVED

JAN 28 2009

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PUBLIC WORKS

January 26, 2009

San Luis Obispo County
Department of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

Attention: Mark Hutchinson

Subject: Los Osos Wastewater Project Draft Environmental Impact Report

The subject EIR addresses the Tonini Ranch as a possible location for a sewer treatment facility. We own a farm parcel 067-031-022 near the Tonini ranch (see attached parcel map) and we strongly object to using this ranch for this purpose. The following are reasons for our objections and would like to request each of these objections be addressed in the final EIR.

1. Although it may be necessary to initially use spray fields to dispose of the treated water, this is a waste of water that can be beneficially used for agricultural purposes. P12-1

2. Using the Tonini ranch for a sewage treatment facility takes a large agricultural property permanently out of production. There is less productive land closer to the area that is being served that should be identified for this use. P12-2

3. The Tonini ranch location will cause a significant amount of energy to be wasted in pumping the sewage a long distance to be treated and then a portion to be pumped back for disposal. This is counter to our National goal of conserving energy and less dependency on foreign oil imports. P12-3

4. Our farm and others nearby will have their values negatively affected because small farms like ours are valued more as a Residential site that the farm value, and residential sites are less attractive when located near a sewage treatment facility. P12-4

Regarding the use of properly treated water for agricultural uses, the technology for this practice is in place and there are many farmlands now P12-5

using this practice. Monterey County has been successfully using this practice for a number of years. Most recently The Pajaro Valley water Management Agency in Watsonville has completed water transmission lines in Pajaro valley and farm use for this treated water will begin in March of this year. While there are additional costs to treat this water, the overall shortage of water in California will justify this expense. We certainly would be happy to use this water on our farm if it were made available to us.

The proposed method of using spray fields to dispose of water may be necessary to take care of the immediate problem. If there are no other sites that can be found for this other than the Tonini ranch, that property could be used until the agricultural use of treated water can be developed and then the land can be put back into its present use.

Location of a treatment plant for the town of Los Osos has been addressed many times. When the first location closest to their neighborhood was chosen, their were second thoughts and enough homeowners who did not want the project in their back yards, stopped the project. New locations were identified for the treatment plant as far east as the cemetery on the Los Osos Valley Road. On September 4, 2007, over 100 homeowners near the cemetery sent a petition to the Board of Supervisors indicating they did not want the treatment plant in their back yards. They support the Tonini location. As you consider sites as far east as Turri Road where there are only a small amount of large ranches and a small number of landowners. They too do not want the treatment plant on prime agricultural land next to their property. It is unfair to burden farm properties far from the populated residential areas with solving the sewer problems for the town of Los Osos miles away.

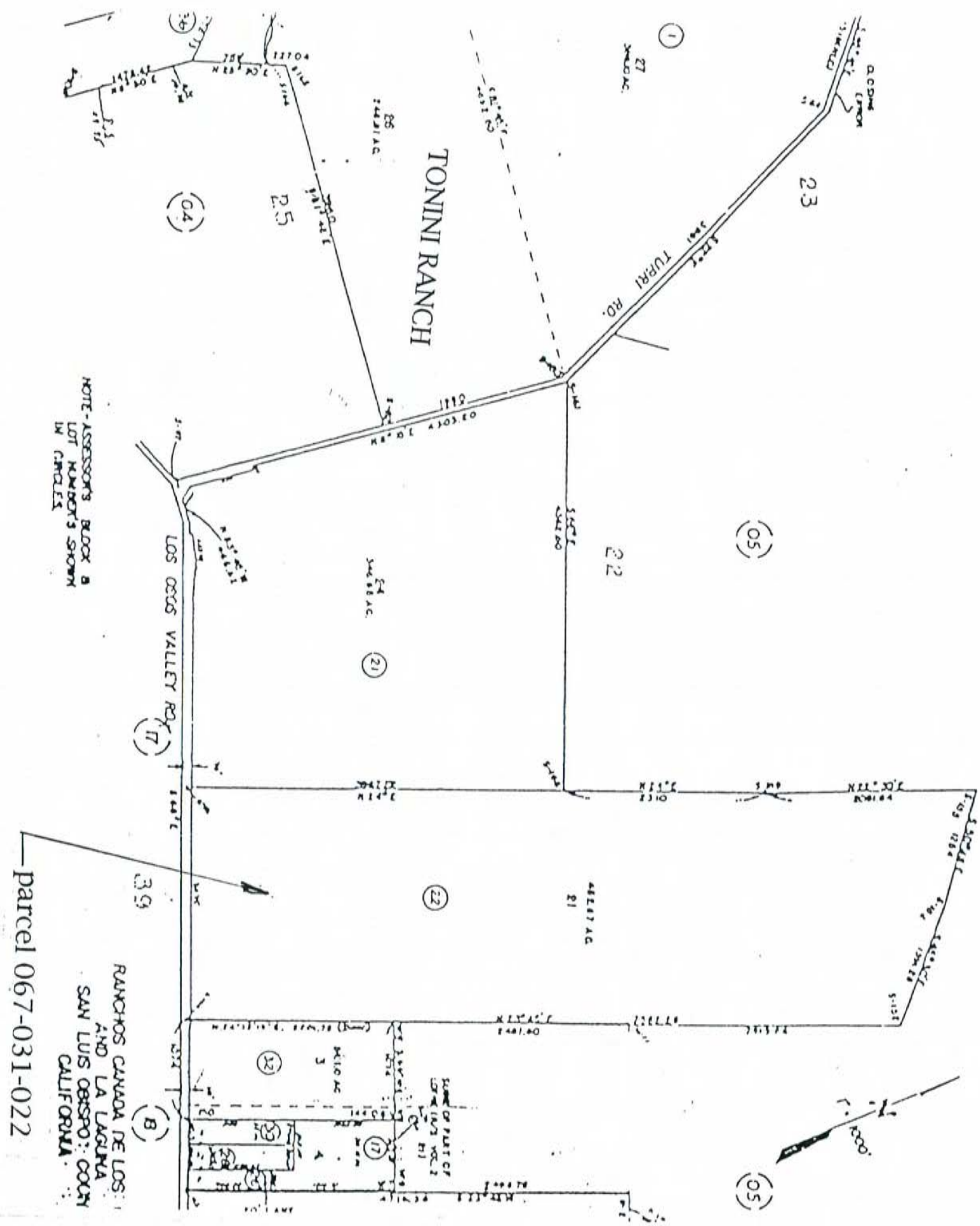
P12-5
CONT

We respectfully request your consideration in this matter.

Sincerely,

Janet Kline

Janet Kline
Co-owner of parcel 067-031-022
309 2nd St. Los Altos, Ca. 94022
650-941-3047


TONINI RANCH
TUPPI RD.
LOS OSOS VALLEY RD.
NOTE-ASSESSOR'S BLOCK & LOT NUMBER'S SHOWN IN CIRCLES
parcel 067-031-022
RANCHOS CANADA DE LOS AND LA LAGUNA
SAN LUIS OBISPO COUNTY
CALIFORNIA

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Janet Kline, January 26, 2009 (Letter P12)

Response to Comment P12-1

This comment states that although it may be necessary initially to use sprayfields to dispose of the treated water, this is a waste of water that can be beneficially used for agricultural purposes. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P12-2

This comment states that using the Tonini ranch location for a sewage treatment facility takes a large agricultural property permanently out of production. There is less productive land closer to the area that is being served that should be identified for this use. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P12-3

This comment states that the Tonini ranch location will cause a significant amount of energy to be wasted in pumping sewage a long distance to be treated and then a portion to be pumped back for disposal. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P12-4

This comment expresses an opinion that their property values would be negatively affected. Impacts on property values are not considered an environmental impact, therefore, this affect is not discussed as part of the Draft EIR.

Response to Comment P12-5

This comment expresses a concern regarding the location of the treatment plant for the proposed project. See Topical Response 4, Tertiary Treatment, regarding the use of properly treated water for agricultural uses.

I vote for Los Osos to have a STEP
Step Steg or Vacuum Collection
Ponding System. (diapers do not plug it up)

EPA DOES NOT
recommend out-dated, energy hog traditional Sewers. think outside the box & build an inovative, modern sustainable, affordable, water-saving waste water system. PLEASE!
Deborah Hutchins

P13-1

Deborah Hutchins
1380 Sixth Street
Los Osos, CA
93402

To:
Mark Hutchinson
Pavel Orgren
County Govt Center
Room 207
San Luis Obispo, CA. 93408
Attn: Public Works Dept

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COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PUBLIC WORKS

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Deborah Hutchins, January 28, 2009 (Letter P13)

Response to Comment P13-1

This comment expresses a desire for the STEP/STEG or Vacuum Collection System. Because there are no comments on the contents of the Draft EIR, no further response is required.

Vivian and Barry Branin
P.O. Box 540
Morro Bay, CA 93442

January 28, 2009

Mr. Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Department of Public Works

Subject: Los Osos Wastewater Project – Los Osos Valley locations.

Our letter is regarding the Los Osos Wastewater Project (LOWO) draft Environmental Impact Report (DEIR).

We agree with the recommend preferred site for the LOWP on the Tonini property for the following reasons;

1. Site is large enough for the present and future needs.
2. Site is away from Warden Lake and the tributaries of the Morro Bay Estuary.
3. Site will have a lesser impact on the wildlife that live around Warden Lake.
4. Property is available from a willing seller.
5. Access is excellent via Turri Road.

P14-1

As a further note we own the 400 plus acres just west of, and adjacent to, the Tonini property. None of our property is for sale and we will strongly object to the taking of any of it by Eminent Domain procedures.

Sincerely,

Vivian and Barry Branin

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Vivian and Barry Branin, January 28, 2009 (Letter P14)

Response to Comment P14-1

This comment expresses an agreement with the recommendation of the preferred site for the LOWWP on the Tonini property. Because there are no comments on the contents of the Draft EIR, no further response is required.

The Families of Turri Ranch
3730 Turri Ranch Road
San Luis Obispo, CA 93405

January 24, 2009

Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Department of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

Subject: Los Osos Wastewater Project Draft Environmental Impact Report

The environmental impacts addressed in the Draft Environmental Impact Report of the Los Osos Wastewater Project directly affect our family. Our property, assessor's parcel number 067-041-003 and 067-031-021, are adjacent to and across Turri Road from the proposed treatment and effluent disposal site for Los Osos wastewater.

For over 100 years five generations of our family have lived and worked on the Turri Ranch and we are deeply committed to preserving its special environment. Turri Road is unique, a quiet country road little changed over the years despite being off busy Los Osos Valley Road. Artists, bicyclists, movie companies, hikers, and TV advertisers enjoy its tranquil beauty and spectacular view of Hollister Peak.

To locate what is essentially an industrial plant in this serene setting is not environmentally sensitive. The possibility of odor problems, noise pollution, greenhouse gas emissions, light pollution and view shed issues cannot be dismissed or readily mitigated. P15-1

The spray fields intended to dispose of the treated effluent by a combination of evapotranspiration and percolation are adjacent to our property. The soil on the Tonini site is identified as Cropley clay. We call it Los Osos adobe that turns to gumbo in wet years, takes forever to dry out and often spontaneously produces springs. We are concerned about run off from saturated ground onto our land. P15-2

During the dry season much of the treated wastewater would be lost to the atmosphere, a waste of a resource that might be used to replenish the Los Osos groundwater basin and to counter seawater intrusion. P15-3

Each of the proposed treatment projects uses a combination of the Tonini and Broderson sites for effluent disposal. To pump wastewater from the town of Los Osos to the most distant site for disposal, and then to return some of it back to a location in town surely is more costly both in energy and dollars.

P15-4

We recognize the ongoing and serious problem facing Los Osos. Exporting their problem to our neighborhood at the expense of the environment does not seem to be the best solution. Therefore we are strongly opposed to locating the treatment plant or spray fields on the Tonini site.

Virginia Alford
The Alford Family

Elizabeth Soderstrom
The Soderstrom Family

The Families of Turri Ranch, Virginia Alford and Elizabeth Soderstrom, January 24, 2009 (Letter P15)

Response to Comment P15-1

This comment expresses a concern regarding the environmental sensitivity of locating the LOWWP in what is considered a serene setting. Sections 5.9, 5.10, and 5.11 of the Draft EIR provide a discussion on the impacts regarding odors, noise pollution, greenhouse gas emissions, and light pollution and viewshed issues.

Response to Comment P15-2

This comment expresses a concern regarding runoff from saturated ground on the Tonini site. The Tonini sprayfield operations will be conducted under a waste discharge permit that will require the facilities to control all runoff around and on the property. The Preferred Project (Appendix Q) would allow evapotranspiration only, thus eliminating the potential for saturated ground. Also see Response to Comment A5-4.

Response to Comment P15-3

This comment expresses a concern regarding seawater intrusion during the dry season. See Topical Response 3, Water Resources and the Project Scope, regarding groundwater replenishment and seawater intrusion measures of the project.

Response to Comment P15-4

This comment states that each of the proposed treatment projects uses a combination of the Tonini and Broderson sites for effluent disposal. To pump wastewater from the town of Los Osos to the most distant site for disposal, and then to return some of it back to a location in town surely is more cost both in energy and dollars. Because there are no comments on the contents of the Draft EIR, no further response is required.

1/28/09

COMMENTS ON ENVIRONMENTAL JUSTICE IN THE DEIR FOR THE LOS OSOS WASTEWATER PROJECT:

"Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work."

The DEIR, and CEQA plus, do not address the Financial Capability Analysis (FCA) requirement. In 1990 the FCA was performed for San Luis Obispo County Service Area #9 upon consideration of an SRF loan to fund the Los Osos project. The project exceeded four of the five financial criteria used and fell into the "high-cost category." This current County project is also considering the SRF loan to fund the Los Osos project, yet no FCA was done or mentioned prior to, or in the DEIR or CEQA plus. There are serious community concerns over the estimated costs of the County's preferred project, including potential effects on the high percentage of low-income residents.

P16-1

An FCA should be conducted using recent costs that include total annual cost per household, taking into account ALL capital and operations and maintenance, according to the USEPA's 1994 letter to the County.

A 1994 EPA pilot study on holistic sustainable development concluded that studies to date in Los Osos ... had been inconclusive, and that further research is necessary ... on the area's hydrogeology, sources of nitrogen and denitrification ..." This was never considered by the County.

Also noted in the USEPA letter was that a source of funding for further studies were grants awarded by the EPA to states for water quality management planning under the authority of section 205(j) of the Clean Water Act, and that program states are responsible for selecting projects that, among other things, identify "MOST COST-EFFECTIVE AND LOCALLY ACCEPTABLE FACILITY AND NON-POINT MEASURES TO MEET AND MAINTAIN WATER QUALITY STANDARDS" AND "DETERMINING THE NATURE, EXTENT, AND CAUSES OF WATER QUALITY PROBLEMS IN THE STATE." This opinion also stated that a comprehensive approach incorporating conventional as well as alternative technologies and ideas holds the most promise for a satisfactory long-term solution. To date, this approach has not been seriously considered by the County to help make the project affordable to the low-income residents of Los Osos. To

date, the County has stated that they will consider only the most expensive option.

The same USEPA letter also stated that the project would "appear to be affordable" if there was "wide community acceptance." There was not wide community acceptance. The County's Prop 218 vote showed that 30% of the homeowners did not vote and that school, County and CSD properties were included that do not fall into the "homeowners" vote; these wrongfully counted entities, subtracted from the results of a homeowner vote, reveal a lack of wide community acceptance. Also, and no less important, many voted yes ONLY because the RWQCB threatened homeowners with CDOs and NOVs, stating that the voters/homeowners would not be able to use their water (or live in their homes) if the County's wastewater Prop 218 vote were to fail. This act of coercion is possibly a felony on the RWQCB's part.

The County's process has denied fair treatment to the targeted project payees -- the people living exclusively in Los Osos' "Prohibition Zone." The "Prohibition Zone" singles out the least advantaged and puts the entire cost of an unaffordable project on them while other residents in the entire district benefit from the project with clean water that the project has promised to deliver, yet not substantiated how, why, or at what final cost. This goes against California constitutional law, giving the burden to only some residents who are low-income and leaving out other residents in the district, as well as state and federal agencies who also benefit and who are NOT exempt under the Prop 218 law. P16-1 CONT

The County of San Luis Obispo has failed to follow the Environmental Justice law by protecting some from paying anything towards the wastewater project while allowing homeowners who can least afford it to bear the entire cost (costs that have not been made clear or final), causing homeowners to lose their homes. The DEIR doesn't address the core financial issues associated with the Los Osos Wastewater Project, but rather attempts to circumvent them by not including them as necessary for meeting state, EPA and Disadvantaged Community guidelines.

These errant actions by the County define "Eminent Domain by Taxation."

Pam Ochs
533 Binscarth Rd.
Los Osos, CA 93402
805-528-1224

Dated 1/28/09

Pam Ochs, January 28, 2009 (Letter P16)

Response to Comment 16-1

This comment expresses a concern regarding cost allocations associated with the proposed project. See Topical Response 2, Project Costs, regarding cost allocations for the project.

COMMENT TO BE CONSIDERED FOR THE ENVIRONMENTAL IMPACT STATEMENT FOR THE LOS OSOS WASTEWATER PROJECT

Conclusion:

Based upon the preliminary analyses outlined below, we urge that the Los Osos Wastewater Treatment Project EIR carefully consider the effectiveness of the alternative wastewater treatment options in treating nonylphenols and other potential endocrine disruptors.

Comment:

Recent work by the San Luis Obispo Science and Ecosystem Alliance (SLOSEA) has discovered tumor growths in fish that inhabit the mudflats of Morro Bay. Further analysis showed that these tumors of reproductive organs (gonads) and the liver may be caused by an organic pollutant. Subsequent chemical analyses of fish liver tissues of over 60 organic pollutants showed that nonylphenol was the most concentrated chemical. A survey of the literature shows that nonylphenol is an endocrine disruptor that can bind to the estrogen receptor. Nonylphenol is used widely as a detergent (as a component of alkyl(mostly nonyl)-phenol ethoxylates) in a wide-range of industrial and household cleaning products, in pesticide formulations as an inactive ingredient, in paints, cosmetics and as a spermicide in condoms. It often enters the environment through sludge from waste water treatment plants (WWTP) that is distributed onto agricultural fields. P17-1

Our initial findings were confirmed by follow-up studies on other fish and marine invertebrate species, some of them used for commercial purposes. Chemical analyses of sediment samples show that nonylphenol is found throughout the bay, suggesting a continuously high source of nonylphenol that discharges into the bay exists. The concentrations of nonylphenol in the sediments are dependent on the organic composition and aerobic conditions of the sediment. Thus it is also possible that nonylphenol discharged by episodic events may accumulate and stay inert in the sediment for months or longer. Intial analyses of sediment samples from downstream the WWTP at the California Mens Colony show ten times the levels of nonylphenol that were found in the bay. Samples taken from two public septic systems in Los Osos are currently analyzed. Studies on septic systems and associated leach fields shows that they are frequently the source of heavy nonylphenol contamination into the environment. The factors that play into such a scenario are complex because they depend on the physical structure of the septic systems, the aerobic conditions and microbial community of the surrounding soil as well as on hydrological parameters. After consulting with the environmental advisor of the local power plant we feel confident that they are aware of nonylphenol and have not been a major source of it in the past (although other unknown issues may surface).

The extent of nonylphenol contamination of near shore coastal ecosystems, specifically estuaries, is greater than it occurs from our studies in Morro Bay alone. We have detected nonylphenol in fish from Tomales Bay and we know of data suggesting that it is widespread in southern California.

It is likely that nonylphenol causes the tumors in fish in Morro Bay, but it is by no means proven. The nature of the effect detergents have on tissues is that they can also

enhance synergistic effects, meaning that they can exaggerate the effects of other pollutants that may be in the environment at concentrations considered safe under testing conditions ignoring such effects. We also found extremely high levels of nonylphenol in fish higher up the trophic food chain in Morro Bay. These levels are likely to also cause pathologies in these fish (we have not directly addressed this question).

Nonylphenol seems to emerge as an ubiquitous pollutant affecting the endocrine (at low levels) and may be other physiological processes (tumor growths) of our aquatic life. Although it is not a unique problem to Morro Bay, at this point it occurs that it is the major pollutant threatening the marine life in Morro Bay. It seems that the reduction or elimination of nonylphenol from the waters and sediments of Morro Bay, probably through appropriate waste water treatment conditions, may be a very important step towards restoring and maintaining the relatively pristine state of Morro Bay. Thus, when you consider various wastewater treatment options for Los Osos, it seems important to specifically consider treatment option for nonylphenol and other endocrine disruptors, especially given that in the case of nonylphenol treatment systems that rely heavily on anaerobic processes and redistribution of sludge in the watershed may increase the concentrations of nonylphenol and its its delivery to the bay and ocean. SLOSEA is interested in serving the community in addressing this issue with our scientific expertise and dedication to a sustainable management practice of Morro Bay.

P17-1
CONT

Sincerely,

Dr. Lars Tomanek, Science Team Member Dr. Dean Wendt, Director

San Luis Obispo Science and Ecosystem Alliance (SLOSEA)

Center for Coastal Marine Sciences
Cal Poly State University
San Luis Obispo, CA 93407-0401

San Luis Obispo Science and Ecosystem Alliance, Dr. Lars Tomanek and Dr. Dean Wendt, January 29, 2009 (Letter P17)

Response to Comment P17-1

This comment expresses a concern regarding nonylphenol contamination of near shore coastal ecosystems. The Los Osos Waste Water Project would not discharge into any stream or Morro Bay. Sludge from the treatment facility will be disposed of in appropriate landfills. One of the advantages of removal of the septic system may be a reduction in contaminated waters into Morro Bay. See also Response to Comment A8-133.

LOS OSOS WASTEWATER PROJECT DEIR COMMENTS #2:

1. NO ENGINEERS STAMP

The Fine Screening Report did not have the required Engineers Stamp to proceed to Final EIR. As is the Fine Screening remains unsubstantiated and unsupported opinion.

The Fine Screening Report is the Body of Evidence on which the Prop 218 vote was based. Without the engineer's stamp, the Fine Screening and everything that came after it is potentially ilegal and, as such, is ill-advised and may not ultimately be binding on current homeowners living in the "Prohibition Zone." P18-1

Unchanged as it is, the flawed Fine Screening, already the uncertfied foundation of the flawed Prop 218 vote, now becomes the basis for a flawed DEIR and an expedited "preferred" project, abridging the County's own process.

2. NO CONFLICT WAIVER

One key reason for this: conflict of interest,

Paavo Ogren stated in writing that he (the County) would have Montgomery/Watson/Harza and Carollo sign a "conflict waiver." I do not believe this has been done. There is a conflict of interest since both companies were consultants to the County's DEIR and now their systems are the "preferred" project in the DEIR. P18-2

The County has hired them from previous projects, and they have recommended only what they build, rejecting any and all alternatives, especially the most cost-effective.

Pam Ochs
533 Binscarth Rd,
Los Osos, CA 93402
805-528-1224

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Pam Ochs, January 29, 2009 (Letter P18)

Response to Comment P18-1

This comment expresses a concern about the lack of engineer's stamp on the Fine Screening Report which formed the basis for the Proposition 218 vote. The comment also states other documents referenced in the Draft EIR also did not contain an engineer's stamp. This concern is not fully supported. The Assessment Engineer's Report (which accompanied the Board of Supervisors action to conduct the Proposition 218 vote) did contain engineer's stamps. The various Technical Memoranda prepared by Carollo Engineers all contain engineer's stamps. The Technical Memoranda prepared by Kennedy-Jenks Consultants (part of the environmental consultant team) all contain engineer's stamps on the reports. The assertion in the comment that the Draft EIR is flawed because of "uncertified foundation" of technical reports is unfounded.

Response to Comment P18-2

This comment expresses a concern about a potential conflict of interest by retaining engineering companies that were used for earlier projects for follow-on work on this LOWWP. The work previously done by other engineering companies certainly forms the basis for overall project development. The environmental consultant team was selected to represent an independent impartial analysis of the LOWWP environmental impacts. The County has also decided to utilize a Design-Build scenario to bring a new set of ideas and methods to the final design and construction of the facilities for the LOWWP. This Design-Build scenario will afford the County, and the community, a new look at construction methods, technology and lower costs than conventional design-bid-build scenarios.

Elaine Watson
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DEIR: SECTION I – PUBLIC HEALTH AND SAFETY

SUMMARY:
DEIR issues of concern are: the routine use, transport and disposal of hazardous materials including the short-term potential impact of petroleum products for equipment fueling and maintenance to long-term use of methanol (project 1), sodium hydroxide and sodium hydrochlorite (projects 2,3,4). Also listed as potentially significant are ag pesticide and chemical residues at the treatment site, release of raw wastewater from broken pipes and pump stations, as well as local water loss for fire fighting.

Issues of concern that are not addressed are:

1. Calculation of total air pollution from diesel powered equipment and vehicles
2. Mitigation for potential trench wall and roadway collapse
3. Discussion of earthquake potential, impact and repair
4. Anticipation of upgraded health standard regulations for secondary treated water
5. Discussion of prevention measures for overflow/spill of contaminated raw sewage
6. Identification of alternatives to methanol
7. Emergency response plan for residents in construction zones
8. Safety measures for pedestrian traffic on unlit streets at night

DISCUSSION:

1. Calculation of total air pollution from diesel powered equipment and vehicles:
    - Determine health impacts of predicted air pollution

Diesel exhaust emissions have serious health consequences, particularly among children, the elderly, those suffering from emphysema and asthma and other impaired respiratory systems.
In fact, chronic obstructive pulmonary disease (COPD) is the fourth leading cause of death in the U.S. Although mitigation for impaired air quality, specifically for particulate matter and NOx, which exceeds allowable thresholds during the construction phase for all four projects are listed in Air Quality, DEIR Section (5.9-27, 5.9-28) this information should be cross referenced with Public Health and Safety, Section I.

P19-1

> "Diesel exhaust also contains over 40 cancer-causing substances, most of which are readily adsorbed on the soot particles. In 1998, California identified diesel PM as a toxic air contaminant based on its potential to cause cancer, premature death, and many other health problems....The estimates of the magnitude of the contribution of diesel PM to air pollution related deaths are based on health studies involving ambient particulate matter pollution in general. The method used to quantify diesel PM's effect likely underestimates its contribution because

this method assumes the diesel Pm, per unit of concentration, has the same health impact as general ambient particulate matter. However, the combination of several factors strongly suggests that diesel emissions pose a significantly greater health threat than non-combustion particle pollution." (EPA, Air Quality Resources Board, "Summary of Adverse Impacts of Diesel Particulate Matter", December, 2008)

"NOx react with ammonia, moisture, and other compounds to form nitric acid vapor and related particles. Human health concerns include effect on breathing and the respiratory system, damage to lung tissue, and premature death. Small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory disease, such as emphysema and bronchitis, and aggravate existing heart disease…Children, the elderly, people with lung diseases such as asthma, and people who work or exercise outside are susceptible to adverse effects such as damage to lung tissue and reduction in lung function. Ozone can be transported by wind currents and cause health impacts far from the original sources. (http://www.epa.gov/air/urbanair/nox/noxfldr.pdf)

NOA (naturally occurring asbestos): "Asbestos is commonly found in ultramafic rock, including serpentine, and near fault zones. The amount of asbestos that is typically present in these rocks range from less than 1% up to about 25%, and sometimes more…Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time. All types of asbestos are hazardous and may cause lung disease and cancer." (California EPA, Air Resources Board, "Naturally-Occurring Asbestos General Information, July 2, 2008)

P19-1
CONT

All construction areas for each project are identified as sites with potential risk of NOA. Sensitive receptors include the 'at risk' population of children, the elderly and other people with respiratory illnesses as well as certain population areas such as hospitals, schools, convalescent facilities and residential areas. Of particular concern are the prohibition zone residential areas, schools, and neighborhoods around Broderson. Wind conditions of any magnitude would expand these immediate areas to include others, potentially creating a very significant impact. An Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program will be required, however no mitigations are identified.

"The (20007) study, which used a mathematical model to estimate future costs related to COPD, found that the disease will cost $176.6 billion in the U.S. over the next five years, and $389.2 billion over the next 10 years. The study is part of the Burden of Obstructive Lung Disease (BOLD) initiative, which is designed to examine the prevalence and burden of COPD around the world."
American Thoracic Society
http://www.thoracic.org/sections/publications/press-releases/conference/articles/copd-will-cost-us-800-billion-over-next-20

2. Mitigation for potential trench wall and roadway collapse:
   - Applies to construction personnel, but may also impact the public

P19-2

It's understood that risk to construction personnel is usually the responsibility of the employer/contractor, but as with any construction activity in a populated area (such as residential streets), involving heavy equipment, deep trench excavation, and potential flooding, there must be public safety consideration in place. The incidence and safety risk of trench wall cave-in, even in relatively shallow trenching, especially in sandy soil conditions is well understood. A quick google search indicates it is a major concern in pipeline construction –it is in fact, one of the top four OSHA safety risks.
To be considered are trenching width and risk of adjacent roadway collapse especially as it affects people moving in and out of their homes during construction.

> Fugro West Geotechnical Report, Los Osos Wastewater Project, March 9, 2004, states: "The potential for caving in the dune sand will generally increase with depth, and length of the trench. It is our opinion that there is a potential for sloughing and caving of the trench sidewalls. Limiting the length of trench or installing temporary trench supports can be used to reduce the potential for caving. Trench shields or jackets shoring with plywood sheeting can be installed to support the trench walls during the placement of the gravel and pipe. (6.7.1.2 pg.6-43)
>
> "Relatively deep trenching will be needed to construct the sewer collection system pipeline. Even moderate caving in deep trenches can result in cracking of adjacent pavement to several feet or more beyond the sawcut line." Trench walls lacking adequate support could experience trench wall instability or movements that could damage adjacent pavements, utilities, or structures." (6.1, pg.6-1)
>
> A recent New Times article titled "Trench Deaths" about an industrial accident involving pipeline construction states: "(Paul) Satti, (Technical Director) of the council (Construction Safety Council) explained that trenches and other excavation accidents are among the top four Occupational Safety and Health Administration concerns..." (New Times, Vol.24, No.25, January 15-22, 2009, pg.11

P19-2
CONT

3. Discussion of earthquake and soil saturation potential, impact and repair:
   - Contamination of ground water from raw sewage release during an earthquake creating a public health risk
   - Pipeline joint separation during seismic settlement causing extensive repair and repetition of all construction health and safety issues
   - Liquefaction and earth slide during an earthquake creating a public safety risk
   - The Broderson area is subject to earth slides from heavy soil saturation

P19-3

Ground lurching during an earthquake will cause gravity system piping to disconnect at joints, causing pipes to break releasing raw sewage into ground water thereby establishing a potential health safety risk. The issue of raw wastewater spills at pump stations, disposal sites and in waterways is mitigated under DEIR 5.7.B.1, pg. 5.7-21, however there is no discussion of groundwater contamination from raw wastewater as a result of seismic activity during an earthquake which would become a significant impact on public health and safety. Large gravity pipes are subject to upheaval, breakage and leakage. This is particularly true at the point of joint coupling, where, because of unsealed jointing, leakage is common. Earthquakes initiate land slides and create areas

of liquefaction in wet soils both of which have the potential for severe impact on gravity piping stability. The Central Coast is listed as a significantly active earthquake area and USGS maps indicate frequent seismic activity in the area. In addition, heavy soil saturation from heavy rains or disposal overload may result in earth slides into adjacent neighborhoods as evidenced by events in 1979 and mid 1980's in which homes on Highland Ave. were flooded with earth and water. Soil and water experts disagree about Broderson's ability to absorb and hold the amount of water slated for disposal there – estimated to be 400,000 g/d in the dry season and 800,000 g/d during the rain season. Wet season disposal will be anticipated to be compounded by additional rains and rain runoff from higher elevations above the Broderson site.

Per Al Barrow 1/22/09: A statement from Larry Riao, Earth Systems and soil studies, Cal Poly, SLO:

"The statements given describing the groundwater conditions are very general and do not adequately characterize the complicated and quite variable system that it is. There are numerous perched water tables located throughout the stabilized sand dunes areas of Los Osos. These "perched" water tables in the stabilized sand dunes have edges; the water flows to the edge and travels down to the next one. So there is both vertical and horizontal movement of water through these lenses. These clay lenses were formed in the low lying areas in the middle of the sand dunes when there was no where else for the water to go. The fines in the sand would be washed to the bottom of the dune during rains and form a clay or silt lense. But the layer is limited in size; it has edges. I have drilled hundreds of borings and placed piezometers (perforated pipes installed in borings for measuring depth to groundwater) and have found that the depth to groundwater is quite variable and difficult to predict. I drilled one lot where there was high water at the front of the lot (8-feet) but could not find any on the back of the lot (deeper than 25-feet), and the lot was relatively level. When the dunes would shift during the heavy and constant winds (think of Oceano Dunes) these lenses would be covered. Even an 1/8-inch layer of silt will hold water. Now there could be many thin layers on top of each other with wind blown sand between them. And these layers aren't as solid as you might think. After it rains, the silt layer will dry out and start cracking, and the edges will curl up. You have probably seen this in other low lying areas like after a pond dries up. So if you have many of these types of layers on top of each other, all of them with some wind blown sand between them, they will hold water but not indefinitely. They really just slow the water down to a trickle. That's why the water tables fluctuate so much in Los Osos, because the water is percolating slowly through these lenses. During the summer the water table lowers, and during the rainy season, they rise. But they only raise so much because of the edges. It would be like drilling microscopic holes in the bottom of a pot and putting the pot under the faucet and turning the water on slowly, the pot would eventually fill up and start flowing over the edge, so the water level would only raise to a certain level. Turn off the water, and the water would slowly drain but it may not empty before the water is turned on again.
It was in some of these perched water tables that had test wells placed in for the Brown & Caldwell study. The problem is, that these perched waters are so variable and abundant, that there has not been a adequate study done to date to properly characterize this shallow underground water system. We also don't know changes in groundwater levels during the winter vs. the summer and during wet seasons vs. dry seasons."

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CONT

Fugro Report, March 9, 2004 addresses the issue of earthquakes, liquefaction and seismic settlement at length:

> "The site is in a seismically active area of California….The site is located near the Los Osos Fault that is considered active, and capable of generating at least a magnitude 6.8 earthquake." (6.1, pg.6-2)

"The manifestation and damage that can be associated with liquefaction is strongly dependent on the duration of the ground motion." (5.8.1, pg.5-8

"The soils encountered within the pipeline network vary from soils having a relatively high potential for liquefaction, to soils having a relatively low potential for liquefaction." (5.8.2, pg.5-8)

"Liquefaction can result in ground mobility that impacts pipeline grades, or results in pipelines floating out of the ground in areas of liquefaction." (5.8.2, pg.5-8)

"The soils encountered within the pipeline network vary from soils having a relatively high potential for liquefaction to soils having a relatively low potential for liquefaction." (5.8.2, pg.5-8)

"The estimated seismic settlement that could occur during the design basis earthquake is estimated to be approximately 1 inch, with a range of negligible settlement to about 1-1/2 inches of settlement. Loose sand blankets the upper 5 to 10 feet of the site over most of the collection system area." (5.8.2, pg. 5-6)

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CONT

A front page article and photograph in the Tribune, Jan. 18, 2009, shows a flooded downtown SLO street after 10 inches of rainfall on Jan. 18, 1969. The article also mentions a flood in 1973.

Frank Asilio submitted photographs/articles to the Los Osos TAC:

6/9/08: Four photographs of a home in the 400 block of Highland Dr. that was flooded by water, mud and sand sometime in the mid 1980's (exact date not determined), when water and sand ran off the hill above Highland Dr. Other homes on the south side of Highland, from the 300 block east to Bayview Heights, also flooded.

6/30/08: Articles from the Telegraph-Tribune dated Dec. 26, 1979 and from the Sun Bulletin dated Dec. 27, 1979 and Jan. 3, 1980 depicting the results of flooding of homes and property in the Highland Dr. and Bayview Heights area following a severe storm.

4. Anticipation of upgraded health standard regulations for treated/recycled water:

- Emerging contaminants present in some food sources and virtually all natural water sources have been identified as a primary causative factor in many biologic and developmental functions.
- A convergence of environmental factors is forcing a re-evaluation of toxic pollutants and will, without doubt, result in significantly more stringent environmental regulations by DHS and EPA.
- Many toxic contaminants can be almost completely removed from water, but requires intensive multi barrier treatment. Some cannot. In order to preserve an adequate future potable water supply it will become necessary to apply a best means approach.
- Projects 1,2,3,4 do not require effluent treatment beyond secondary treatment

P19-4

There are strong indications from EPA and DHS (California Department of Health Services) that regulations for water and, most particularly, recycled water will be aggressively expanded as emerging contaminants continue to be studied. With increased public awareness of food, air and water borne health threats in the form of pollutants, evolving virus/bacteria, and unmonitored production practices, selling recycled water to an alert, wary public will become increasingly difficult and will only be accomplished by establishing confidence in regulatory agency diligence. There is much evidence and extrapolation from evidence that emerging contaminants are having a serious, detrimental impact on human and wildlife health, particularly to the endocrine and reproductive systems. It is now understood that hormone mimicking drugs and other chemicals have a bio-cumulative effect and are readily detectable in breast milk. It is also common knowledge that the two main categories of chemicals, mutagens and carcinogens, are creating health and developmental problems in children and wildlife. Young girls are experiencing early endocrine system activation, resulting in very early maturation, while boys are also undergoing discernable physical changes. The incidence of uterine and breast cancers are now common in increasingly younger women and have been linked to hormone-mimicking substances in food and water. Frogs and other aquatic life have lower sperm counts and are producing malformed offspring. Because water is consumed in larger quantities than other foods, it is believed that water quality has the most significant impact. As technology in detecting, identifying and treating for these emerging contaminants continues to advance, it is anticipated that regulations will become increasingly stricter in both contaminant and allowable levels.

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CONT

There is discussion posing future reuse/recharge in ag exchange yet the DEIR contains no discussion about treatment and infrastructure requirements. Wastewater must be treated to specific standards for direct use on edible crops. New draft regulations setting new guidelines for disposal quality water (level of treatment required before water can be discharged to a disposal site) can be seen in Title 22, Groundwater Recharge Reuse DRAFT Regulation, August 5, 2008 (pg.20-22) which states proposed regulations for the use of RO for TOC's (total organic compounds). The DEIR refers to Broderson as a recharge site for the upper aquifier: Current IPR (indirect potable reuse) regulations indicate that water pumped to Broderson would require at least tertiary level treated water if soil characteristics, hydrology, distance to withdrawal, etc. prove to be inadequate to remove all contaminants to the appropriate level. However, indications are that IPR water will require advanced treatment systems with multi-barrier safeguards in the not too distant future. There is clearly a movement toward the use of advanced treatment systems including reverse osmosis, UV and various levels of sophisticated filtration systems

P19-5

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A serious potential health risk, rarely discussed, exists as a result of open bodies of water such as ponds (as opposed to wells) exposed to tritium as a result of Los Oso's proximity to Diablo Nuclear Power Plant. There is no known system to remove tritium because it is actually a water molecule, but testing for this and other 'at risk' contaminants should be mandatory

> "Evidence suggests that environmental exposure to some anthropogenic chemicals may result in disruption of endocrine systems in human and wildlife populations. A number of the classes of chemicals suspected of causing endocrine disruption fall within the purview of the U.S. Environmental Protection Agency's (EPA) mandates to protect both public health and the environment. Although

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there is a wealth of information regarding endocrine disruptors, many critical scientific uncertainties still remain.

Determining the extent of the impact of endocrine disruptors on humans, wildlife, and the environment. Research includes determining: what effects are occurring in human and wildlife populations, the chemical classes of greatest concern, the ambient levels of exposure, and how unreasonable risks can be mitigated."

EPA: Endocrine Disruptors Research Initiative http://www.epa.gov/edrlupvx/

"The USGS has a major interest in collaborating with other agencies to inform the public and Congress of the issue of endocrine disruption. Over the last 10 years, the USGS has developed research and monitoring programs on the biological response to endocrine disrupting chemicals (EDC's) in the nation's waterways and has identified priorities and opportunities for collaboration with other federal agencies."

Sue Haseltine, Associate Director for Biology, USGS
://es.epa.gov/ncer/publications/workshop/cenr_2202007.pdf

Huffington Post, March 10,2008: Sex Hormones, Mood Stabilizers Found in Drinking Water of 41 Million Americans quotes Mary Buzy, Director of Environmental Technology for drug maker, Merck & Co. "There's no doubt about it, pharmaceuticals are being detected in the environment and there is genuine concern that these compounds, in the small concentrations that they're at, could be causing impacts to human health or to aquatic organisms." (pg.3)

Also: "Recent laboratory research has found that small amounts of medication have affected human embryonic kidney cells, human blood cells and human breast cancer cells. The cancer cells proliferated too quickly; the kidney cells grew too slowly, and the blood cells showed biological activity associated with inflammation." (pg.3)

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"There's growing concern in the scientific community, meanwhile, that certain drugs – or combinations of drugs- may harm humans over decades because water, unlike most specific foods, is consumed in sizable amounts every day." (pg.3)

Al Barrow showed a photograph by Dr Tom Rhuer, Soil Science Professor, Cal Poly, SLO at the joint SLO County Public Works/CSD meeting on January12, 2009 showing a substrata image of fine lenses illustrating "clear evidence of these fine lenses that hold or transport water laterally below grade. The point this is that the intended recharge at Broderson of 400,000 GDP will likely move laterally down slope rather than vertically to create a pressure gradient strong enough to force reversal of seawater intrusion in the lower aquifer. On the contrary the most probable destination of these waters will be the brackish wetlands around the Morro Bay shoreline. Where the contaminants will interfere with the reproductive cycles of the biological life in Morro Bay. Steelhead have historically spawned in the bay. Studies by MBNEP have shown alarming damage to species of fish in the MB"

"The DEIR contemplates only secondary treatment of effluent. The evolution of state and federal standards for wastewater treatment has been heading in only one

direction – up – and it is likely that tertiary treatment will be required by law by the time the Los Osos wastewater treatment project is completed. Morro Bay and Cayucos, with significant encouragement from the environmental community, saw that writing on the wall when they decided to upgrade their wastewater treatment plant to bring it into compliance with the Clean Water Act, and went beyond the current minimum of secondary treatment, mandating a tertiary component." Santa Lucian, vol. 46, No.1, January, 2009:

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According to Appendix G: Science , Technology, and Regulatory Issues, Water Reuse Study, March 2006"…only disinfected tertiary recycled water (the highest level of treatment for irrigation uses) is allowed for irrigating root crops (food) or schoolyards." (pg.G-15). It's assumed this would be true for field spray for all food crops..

If recharge efforts fail to stop seawater intrusions and injection wells are used, advanced water reclamation treatment will, by regulation, require "…the injected water must be of higher quality than that used for surface spreading. Some states require treatment to drinking water standards prior to injection." Appendix G, (pg. G-19)

Title 22, California Code of Regulations, Groundwater Recharge Reuse, Draft Regulation, August 5, 2008, (pg. 20)

Section 60320.045 Total Organic Carbon Requirements
(a) For each surface or subsurface application facility used for replenishing a groundwater basin, the GRRP shall monitor TOC as follows:
2) For recycled municipal wastewater, at least one 24-hour composite sample each week prior to recharge, or
(3) For surface application, at least one sample each week in a manner yielding TOC values representative of the recycled municipal wastewater TOC after infiltration and percolation, and not influenced by diluent water, native groundwater, or other source of dilution as determined by:

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(A) measuring undiluted percolating recycled municipal wastewater,
(B) measuring diluted percolating recycled municipal wastewater and adjusting the value for the diluent water effect, or
(C) using recharge demonstration studies to develop a soil treatment factor that can be applied weekly to recycled municipal wastewater measurements leaving the treatment plant.
(b) Grab samples may be taken in lieu of the 24-hour composite samples required in subsection (a) if:
(1) the GRRP demonstrates that a grab sample is representative of the water quality throughout a 24-hour period, or

There are many sites explaining tritium, but the Greenpeace website explains it more efficiently and economically of space than others.

http://www.greenpeace.org/canada/en/campaigns/end-the-nuclear threat/threats/waste/questions-and-answers-about-tr

Q. What is tritium?

A. Radioactive water or water vapour. It's not something in the water, but the water molecules themselves that are radioactive.

Tritium is the radioactive isotope of hydrogen. That means tritium is unstable and gives off radiation when it disintegrates. In the environment, the most common kind of tritium is tritiated water - that is, water molecules in which one (or both) of their hydrogen atoms is radioactive.

Q. Is it dangerous?

A. Yes, tritium is hazardous when you drink it, eat it, breathe it in or you absorb it through your skin.

Tritium is not considered an external hazard, but is an internal one. It has a radioactive half life of about 12 years which means it stays around in the environment for a long time. It has the unusual properties of extremely rapid transport in the environment, quick uptake by humans, fast exchange mechanisms with other hydrogen atoms, and the ability to bind with organic molecules during cell formation and cell metabolism.

Q. What are the effects of exposure to tritium?

A. Radiation causes cancers, congenital malformations and genetic effects

Tritium is a radionuclide and all radionuclides when ingested or inhaled give off radiation. Radiation is known to be a carcinogen, teratogen and mutagen, and these effects are thought to occur down to the lowest possible exposures.

Q. Why is Greenpeace concerned about tritium in Canada?

A. Huge amounts are pumped into Lake Huron and Lake Ontario every day from Canada's nuclear power stations. Huge amounts are released to the air, as well.

Tritium discharges from Canadian reactors are by far the largest in the world from civil nuclear power stations. They are 100s to 1000s times greater than tritium discharges from other kinds of nuclear reactors.

Q. Should I be concerned?

A. The closer you live to a nuclear power station, the more you should inform yourself about tritium. Near them, all rivers, wells, vegetation and animals, including humans, have raised levels of tritium inside them.

Tritium emissions to air result in all downwind matter containing hydrogen becoming tritiated to ambient levels. This results in people drinking, breathing and absorbing tritium-contaminated water, and eating tritium-contaminated food.

5. Discussion of prevention measures for overflow/spill of contaminated raw sewage:

The issue of raw wastewater spills at pump stations, disposal sites and in waterways is mitigated under DEIR 5.7.B.1, pg. 5.7-21by the use of containment and other measures, however there is no discussion of prevention protocols for overflow, spill and leakage of raw wastewater. Power outages and heavy storm overload can cause backup, overflow, spills and leakage at pump stations and manholes releasing sewage onto surface areas where it becomes a public health risk. In all matters, involving measurable risk, it is in

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the interest of all concerned to employ the precautionary principle. To that end, adequate storage capacity, back-up generators and routine maintenance measures would potentially prevent the mentioned health risks as well as clean-up costs, hazardous disposal and RWQCB fines.

> "The panel also concurs…the collection system for the Los Osos Wastewater Project should: Provide the greatest possible protection against overflows and other releases of partially treated or untreated wastewater from the system, which could pollute Morro Bay and other sensitive coastal ecosystems." NWRI, Final Report, San Luis Obispo County Los Osos Wastewater Project, October 23, 2008
>
> "…fail-safe systems must be required, including back-up generators and sufficient storage capacity to deal with electrical outages and protracted storm conditions." Testimony of Ellen Stern Harris, Executive Director of the Fund of the Environment, Submitted for the 2/26/03 Public Workshop of the DWR/SWRCB/DHS 2002
> Recycled Water Task Force and The Environmental Justice Coalition for Water
>
> In a document titled: Regional Board Analysis Of Enforcement Criteria Established section d.6 of Order No. 2006-0003-DWQ, Item 16, Attachment 6. (December 12, 2007)
> The RWQCB ruled to prosecute the City of Oceanside for negligence for anticipating an illegal discharge due to pipeline failure citing, among other remedies, "Preventative maintenance (including cleaning and fats, oils and grease (FOG) control: Installation of adequate backup equipment: and Inflow and infiltration prevention and control to the extent practicable." (pg.3)
>
> In addition the City of North Bend, Final Comprehensive Sewer Plan, July 2001 recommends a root cutting program, grease trap inspection program, video inspection program to monitor the overall structural condition of the system, a lift station maintenance program and an inflow and infiltration analysis program to ensure that the necessary overloading of the wastewater treatment plant is avoided.

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CONT

6. Identification of alternatives to methanol:

Methanol is added to wastewater to provide a carbon food source for the denitrifying bacteria which convert nitrates to nitrogen gas in sensitive aquifiers. The EPA began a study of the carcinogenic effects of methanol in 2002 to be completed in 2010. Although an Italian study has identified methanol as a human carcinogen, more study will be necessary to be conclusive. (Canadian C+2 Petrochemical Report, Vol.25. Issue 2, Feb. 2008). Since methanol would be an ongoing issue with the Step treatment system and is listed as having a potential significant health and safety impact, it appears it would be possible to mitigate for this risk by recalculating the GHG impact from more recent data, by employing one of several alternatives to methanol or re-evaluating the necessity for methanol in Step effluent treatment. The Methanol Institute states "Through the implementation of efficiency improvements, and through replacing of older facilities with newer plants that use more efficient technologies, over the last decade methanol plants have been able to significantly reduce CO2 emissions by up to 40%: some facilities

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report emissions as low as 0.54 tonnes of CO2/tonne of methanol produced. This is equivalent to emitting 3.8 lbs. of CO2 per gallon of methanol." (reference attached).

Methanol is partly dependent on crude oil prices, and although petroleum prices have come down in the past few months, it is still a finite, politically driven commodity, subject to potentially volatile pricing. The study below lists high fructose corn syrup as the most cost effective alternative.

> "Methanol is commonly used as a substrate in teritary denitrification systems. The addition of methanol for denitrifiction is based on its biodegradability and availability, but methanol also has some disadvantages, including its potential for evaporative loss, a resulting danger of spark ignition, and the effect of evaporative losses on the surrounding air quality. These concerns have resulted in increasingly strict legislation in Southern California regarding the storage and use of methanol…An alternative substrate to methanol was sought for tertiary detrification. High fructose corn syrup (HFCS) was identified as the most cost effective alternative, which would also be much safer to handle. This should also render HFCS subject to less legislation at all levels of government." (pg. 3479) Water Environment Foundation, 2006: Give Your Denitrification Bugs a Sugar High, Coenraad Pretorius, Rudy Kilian, John Jannone
> Carollo Engineers, P.C., 10540 Talbert Avenue, Suite 200 East, Fountain Valley, CA 92708, USA, Eastern Municipal Water District, 2270 Trumble Road Perris, CA 92572-8300, USA

P19-11 CONT

Another consideration is: "Facultative ponds will always require an add-on treatment process for denitrification, regardless of the wastewater collection method …STEP can also be fed into an oxidation ditch prior to an anoxic zone. STEP raw effluent does have carbon for denitrification and the quantity is constant. Additionally, if required, supplemental carbon source could be added at this point." (Mike Saunders, Orenco) The methanol issue could be eliminated by combining STEP with oxidation ditch treatment.

P19-12

7. . Emergency response to residents in construction zones:

Construction contractors appear to have an emergency response plan for construction workers in place, but there doesn't appear to be a plan for emergency access for residents who reside in the construction area.

P19-13

8. . Safety measures for pedestrian traffic on unlit streets at night

Pedestrian traffic often continues until very late evening as people walk to the bay from their homes. Los Osos streets are unlit and, on moonless evenings, it can be very dark with severe visual limitations. This can be easily mitigated but the issue isn't addressed.

P19-14

QUESTIONS

1. Why was air quality not addressed in DEIR Health and Safety since diesel exhaust emissions and NOA levels exceed allowable standards in all four projects during the construction phase and takes place in school and residential areas, some with heavy pedestrian and bike traffic as well as other outdoor activities?

Wouldn't reduced trenching (using small flexible pipe and directional boring substantially mitigate for these issues? If no, please explain why and if yes, please recalculate emission and NOA levels for an accurate comparison. P19-15

How many truckloads for soil and contaminated water removal will be required for each project?

2. How will trench walls be secured?

How will public safety be ensured?

Directional boring would eliminate the risks of collapse, worker injury, insurance costs, most soil disposal including much of the effluent contaminated soils (a result of the disturbance of effluent encased within soil lenses). Please explain how the projects under consideration offset these issues. P19-16

3. The 1994 Northridge earthquake gravity system repair took about 14 years to make the system operational and some repairs continue to the present. By contrast, most small pipe water lines were functional within about 24 hours. Los Osos is in a seismically active zone. With the always present risk of earthquakes, the separation/breakage/leakage of large pipes and subsequent health risk, the cost of reconnecting/rebuilding the system how, incorporating these points, please explain the advantage of large pipe rather than sealed, flexible small pipe? P19-17

4. How does the County plan to upgrade water as regulations expand?

Cost is cited for the County's reason not to clean water to tertiary standards, but it is clear that this will become a future requirement (Morro Bay elected to include tertiary ahead of regulations). How will this be paid for at some future date? P19-18

It is understood that the County intends to refer water quality issues to RWQCB and local purveyors, but as overseer of County health and environmental issues and, the increasing imperative to plan, test, monitor and address for emerging contaminants all analytical testing, toxicological testing and epidemiological research must become a priority in which all parties are held to a higher health and environmental standard. Because the project that is chosen can have a significant impact in many quality-of-life facets for Los Osos residents, please discuss the issues of tritium, and endocrine disruptors along with other frequently prescribed pharmaceutical's that are showing up in water supplies and how the County plans to meet stricter water quality regulations. P19-19

5. What are the prevention protocols for raw sewage/effluent surfacing at manholes and pump stations due to power outages, heavy storm overload/runoff, and earthquakes and why were they not included in the analysis?

If there is no prevention plan, why not? Again, small pipe would eliminate raw sewage spills and flexible pipe would significantly reduce joint separation/breakage/leakage greatly reducing health risks additional costs from contamination P19-20

Land slides can and are life threatening events. Storm incidence and earthquake probability make this a probable eventuality. How will homeowners be protected physically and financially (homeowners may find themselves ineligible for flood insurance because insurance companies are reluctant to insure in problematic locations)?

6. What is the methanol GHG calculation for Project 1 based on recent manufacturing plant reductions of about 40% or 3.8 lbs of CO2 per gallon of methanol? P19-21

What alternatives to methanol were discussed? Why were they rejected? P19-22

Why did the County chose to pair STEP with facultative ponds rather than oxidation ditch as in Projects 2,3 and 4? P19-23

How was methanol weighted and how did it effect the selection outcome for the preferred project? P19-24

7. Is there an emergency response plan for residents in construction zones? How/when will the public be notified? P19-25

8. Safety measures for pedestrian traffic on unlit streets at night are easily mitigated such as continuous barriers with flashing lights. What is the plan? P19-26

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Elaine Watson, January 30, 2009 (Letter P19)

Response to Comment P19-1

This comment expresses a desire for the document to expand on information about health effects of diesel particulate matter and naturally occurring asbestos effects. The Draft EIR fully and adequately discusses health effects from diesel emissions and naturally occurring asbestos. See Response to Comment A8-130 regarding diesel health effects and Response to Comment A9-5 regarding naturally occurring asbestos.

Response to Comment P19-2

This comment expresses a concern regarding the public safety associated with trenching. See Response to Comment A8-124. See Topical Response 13, Construction Excavation, regarding the shoring requirements for OSHA.

Response to Comment P19-3

This comment expresses a concern regarding earthquake impacts associated with the gravity system pipelines. See Response to Comment A8-25 regarding the issue of earthquakes, liquefaction and seismic settlement.

Response to Comment P19-4

This comment expresses a concern regarding future health regulation modifications. See Topical Response 4, Tertiary Treatment Option, regarding various schemes of reuse of treated effluent. See Response to Comment A8-133 for future treatment options if regulations change.

Response to Comment P19-5

This comment expresses a concern regarding future regulations associated with wastewater treatment. See Topical Response 4, Tertiary Treatment Option, regarding agricultural reuse.

Response to Comment P19-6

This comment expresses concern that a serious potential health risk exists as a result of open bodies of water such as ponds exposed to tritium as a result of Los Osos' proximity to Diablo Nuclear Power Plant. Implementation of the proposed project would not cause health risks associated with tritium.

Response to Comment P19-7

This comment expresses concern about the impacts of endocrine disruptors on humans, wildlife, and the environment when found in water. The comment continues with the idea that most wastewater discharged at the Broderson site would likely move laterally down the slope and surface in brackish water of the Morro Bay estuary (with unknown impacts to native specie). A detailed discussion of the groundwater conditions at and downgrade from the Broderson site is contained in Section 5.2, Groundwater Resources and in Appendix D-1, Expanded Groundwater Quality Resources Analysis. Both sections acknowledge the clay "lenses" present in the soils downgrade from Broderson. However, the sections, with reference to many previous studies performed, verify the connectivity of

water percolated from Broderson to the lower aquifer. See also Response to Comment A8-133 with regard to health issues of treated effluent.

Response to Comment P19-8

This comment expresses the opinion that the level of treatment provided by the LOWWP should be disinfected tertiary treatment instead of secondary treatment. See Topical Response 4, Tertiary Treatment.

Response to Comment P19-9

This comment expresses a concern regarding seawater intrusion and tritium contamination. See Topical Response 3, Water Resources and the Project Scope, regarding seawater intrusion measures of the project and Response to Comment P19-6 for tritium concerns.

Response to Comment P19-10

This comment expresses concerns about prevention measures for overflow/spills of raw sewage in the community. See Topical Response 10, Infiltration, Inflow and Exfiltration; and Topical Response11, Construction and Post-Construction Stormwater.

Response to Comment P19-11

This comment expresses that there needs to be a better evaluation of GHG impact from methanol. See Response to Comment A8-127 regarding GHG impacts from methanol.

Response to Comment P19-12

This comment suggests that if a STEP/STEG wastewater collection system is paired with an oxidation ditch instead of a facultative pond, then methanol addition would not be required. In Fine Screening Report Section 4.6, Effluent Nitrogen Considerations, estimated nitrogen removal limits are provided for each treatment alternative paired separately with gravity and STEP collection systems. When paired with a STEP/STEG collection system, no secondary treatment process alone was sufficient to produce effluent meeting the maximum nitrogen concentration of 7 mg/l. Consequently adding denitrification filters with methanol as a carbon source would be required for all proposed projects that include a STEP/STEG collection system. Additional explanation is provided in Sections 3.5, 5.1.4, 5.2.5.1, and 5.2.7.3 of Appendix B-1.

Response to Comment P19-13

This comment asked about emergency response to residents in construction zone. As identified in Mitigation Measure 5.8-A.1 on page 5.8-11 in the Draft EIR, a traffic management plan shall be implemented during construction activities. This plan could accommodate emergency access. See Response to Comment A8-129 for further details.

Response to Comment P19-14

This comment is concerned with safety measures for pedestrian traffic on unlit streets at night. See Response to Comment A8-129.

Response to Comment P19-15

This comment expresses a concern that air quality was not addressed in the Health and Safety Section of the Draft EIR since diesel exhaust emissions and NOA levels exceed allowable standards in all four projects during the construction phase. Section 5.9 of the Draft EIR provides a discussion of air quality impacts during the construction phase of the proposed project.

Response to Comment P19-16

This comment expresses a concern regarding trench wall and public safety associated with directional boring. See Topical Response 13, Construction Excavation.

Response to Comment P19-17

The comment expresses concern about seismic events in the area causing significant disruption to service due to broken lines. The comment further differentiates the extent of damage to state that systems with large pipes are more susceptible to long-term damage than systems with small pipes. It is not clear from this comment what constitutes a small pipe from a large one. The proposed collection system contains pipes varying in size from 4-inches in diameter (for gravity sewer laterals) to main gravity main lines up to eighteen inches in diameter. In typical sewer systems these are not considered large lines. The larger lines are buried at depths typically less than eight feet in road rights-of-way, thus making access to the line in the event of breakage straight-forward.

Response to Comment P19-18

The comment expresses concern about not using tertiary treatment for the wastewater treatment process due to costs. A more detailed response to this comment is contained in Topical Response 4, Tertiary Treatment.

Response to Comment P19-19

This comment expresses a concern about the responsibilities of the County related to testing for various chemicals, metals, emerging contaminants, endocrine disruptors, toxicological, and epidemiological research in the wastewater stream. The wastewater treatment effluent will comply with all requirements set forth by the Regional Water Quality Board for the Wastewater Disposal Requirement (WDR) Permit. It is possible further scientific research may reveal trends that will become a part of future WDR's for the Treatment Facility by defining limits or thresholds for these particular constituents. The County's plans for the Treatment Facility allow room for expansion of various components (such as filters, disinfection alternatives and the like) to deal with these constituents to operate in full compliance with their operating and disposal permits. See also Response to Comment A8-133.

Response to Comment P19-20

This comment expresses a concern about spill prevention protocols. See Topical Response 10, Infiltration, Inflow and Exfiltration.

Response to Comment P19-21

This comment asks if the methanol GHG calculations are based on recent manufacturing plant reduction of about 40 percent. The Methanol Institute, an organization representing the global methanol industry, notes on its website that over the last decade methanol plants have reduced the carbon footprint of the manufacturing of methanol. The website does not provide any information regarding how the reported carbon footprint data were derived, what methods the plants used, or what sources were considered in calculating the carbon footprint. While it is expected that the carbon footprint of most industrial activities in the US will be reduced over time, the Greenhouse Gas Technical Memorandum and the Draft EIR use the most recent verifiable information generally accepted by the air quality community in calculating the information presented in the EIR. See also the Response to Comment A8-136.

Response to Comment P19-22

This comment expresses a concern regarding alternatives to methanol and why they were rejected. Methanol is used as a carbon source for de-nitrification of the wastewater effluent stream in order to meet the RWQCB Waste Discharge Requirement (WDR) Permit standards for nitrogen levels in the final effluent. Section 4.6 of the Fine Screening Report (FSR) contains a brief discussion of the use of methanol. De-nitrification is needed for both STEP and conventional wastewater treatment systems to meet the compliance limit of 7mg/L.

Methanol was chosen for the evaluation because it is the most commonly used carbon source for WWTP's in the State and is consistently available in this area. Methanol is also the most concentrated form of carbon available, thus reducing operating, storage and transportation costs. Because of its concentrated form, the process of de-nitrification is more controllable with methanol than with substitutes. From a CEQA perspective, it represents the reasonable worst case in regards to GHG emissions. Consequently, the inclusion of methanol in our analysis would eliminate the danger of underestimating an important potential impact.

There are other ways to get the carbon source, such as micro-biologic organisms, de-nitrifying beds or by using wetlands, but they tend to be more land use intensive. The methanol can be added as part of the wastewater treatment stream without adding to the overall footprint of the treatment facility.

Response to Comment P19-23

This comment concerns the decision to pair STEP with facultative ponds instead of an oxidation ditch in Proposed Projects 2, 3, and 4. See Response to Comment P19-12. In addition, the intention was to provide a reasonable range of alternatives so that the various project combinations could be compared. The differences between an oxidation ditch treatment plant with a STEP/STEG collection system compared to an oxidation ditch with a gravity collection system would be similar to the differences between facultative ponds with a STEP/STEG versus gravity collection system.

Response to Comment P19-24

This comment asks how methanol was weighted and how it effected selection of preferred project. The carbon footprint of methanol is reflected in table 5.9-15 (Operational GHG Emissions) in appendix K. Under the "treatment" category, methanol is one of the chemicals that have an off-site GHG footprint. For the two alternatives that require methanol (1 and 4), the off-site GHG footprint attributable to methanol is about 340 tons of CO_2 equivalent per year. The GHG footprint of each alternative is one of several factors used in determining the environmentally superior alternative (see section 7.4 in the EIR). The various factors are weighted evenly. If the greenhouse gas footprint attributable to methanol were reduced by 60 percent as suggested in various comments, the results of the comparisons in chapter 7 would not change; alternatives 1 and 4 would still have larger carbon footprints than alternatives 2 and 3.

Response to Comment P19-25

This comment expresses a desire for clarification regarding an emergency response plan and how the public will be notified. See Response to Comment A8-128 regarding emergency response to residents within construction zones. As part of the Traffic Management Plan and as outlined in Mitigation Measure 5.8-A1, the public would be notified of proposed construction activities prior to beginning the construction activities and periodically during the course of project construction.

Response to Comment P19-26

This comment expresses a desire for clarification regarding pedestrian safety measures at night. See Response to Comment A8-129 regarding safety measures for pedestrian traffic on unlit streets at night.

To: Mark Hutchinson

From: SLO Green Build – Technical Committee
Date: January 30, 2009
Re: Comments for LOWWP DEIR

SLO Green Build is committed to the pursuit sustainable and livable communities. This includes environmental design in community planning; green building techniques and materials, conservation and the investment of emerging appropriate technologies. We support business and government choices that utilize triple bottom line accounting, the simultaneous pursuit of social equities, environmental health and economic prosperity. We support decision-making processes that incorporate integrated design, life cycle costing and whole systems reflection. Upon these principals the following recommendations and requests are submitted regarding the LOWWP DEIR.

First, we recognize mutual agreement that immediate action needs to be taken to;

1. Reduce nitrate releases into the groundwater and treat existing wastewater.
2. Stop and reverse salt-water intrusion into fresh water aquifers.
3. Plan for future development.

Potential significant negative environmental impacts exist if, aggressive conservation and incorporation of appropriate technologies are omitted from efforts to mitigate the agreed upon issues. The current DEIR does not address system choices in an integrated approach. The critic focuses on the system choice alone. Conservation and other measures are viewed separately and little at that. These measure include, but are not limited to, Low Impact Development strategies, rainwater harvesting and cisterns, greywater, and composting toilets.

P20-1

Water conservation goals in the DEIR are stated to be a 10% reduction of potable water pumping by the year 2020. This 10% goal falls short of what can be achieved, and the time frame is far too long. The December 2008 California Chronicle reports California Assembly Bill 49 will reduce urban per capita water use 20 percent by 2020. The LOWWP should, at a minimum, apply this 20% goal. San Luis Obispo County has declared the Los Osos basin as a Level III water severity, the County's highest level of severity. Many studies and reports show communities are living comfortably with average daily use per person in the 35-to 50 gpd ranges. The DEIR states average per person indoor use in Los Osos at approximately 66 gpd. We feel a 20-30% reduction of potable water use within the first few years after the project starts is a reasonable goal. Conservation efforts should begin at first opportunity. Water conservation reduces the overall volume and costs of the LOWWP. It also reduces salt-water intrusion (SWI). The DEIR states that SWI is moving at a startling rate of approximately 60 feet per year. Many would argue that salt-water intrusion is more of a threat to the Los Osos basin than ground water nitrates.

There are numerous government programs that support technologies and behaviors that use water resources more wisely and reduce pollutants in our ecologies. Water purveyors and communities need to find programs that are mutually supported There are many statistics and resources available that attempt to quantify conservation in gallons, dollar savings, energy use and reduction in pollution. There are varying numbers available. But all agree, conservation and the use of emerging appropriate technologies could conserve, reuse or capture are water resources. Following are some examples;

1. Coroma high efficiency dual flush toilet conserves approximately 3,800 gallons per year over a gallon toilet in a typical home.

2. Two and a half bath home in Santa Barbara saves approximately 190,740 gallons of potable water over a twenty (20) year period using greywater for irrigation needs. P20-1 CONT

3. Energy star clothes washer will save $500 dollars and 5,000 gallons of water a year and all water can be re-used for sub-surface irrigation

4. A leaky toilet can waste 200 gallons per day or 73,000 gallons a year.

5. 1" of rain captured on a 1000 sq/ft roof will produce 630 gallons; a normal Los Osos yearly rainfall of 17" would produce 10,710. A 2000 sq/ft roof would produce 21,420

The DEIR states (p.2-13)…"proposed (LOWWP) projects <u>may</u> include the proposed water conservation measures, which mandate that property owners retrofit… with low flow fixtures…prior to hooking up to the sewer." In this section "<u>may</u> include" should be changed to "<u>must</u> include…". If 'may', is exercised to 'may not', then not mandating water conservation will result in significant negative environmental impacts to water quality.

Mandatory retrofits and other aggressive conservation measures should begin to be implemented immediately. An analysis should be done comparing the benefits and environmental impacts of immediate conservation versus a delayed, phased implementation of conservation.

A potential significant environmental impact exists in the recharging of the basin and reduced flows to the National Estuary/State Marine Reserve. Specifically as a result from delayed conservation efforts, and the basin balance conditions from table 8, Appendix D-2 (Hopkins Groundwater Consultants) may have used incorrect assumptions, calculations and/or modeling for upper aquifer recharge as it relates to septic return flows. Keith Wimer and others have provided independent review of table 8. There is justification to reanalyze or reevaluate basin balance calculations in table 8 based on these independent reviews. Please see Keith Wimer's (LOCAC, LOSG) DEIR comments on table 8 for detailed explanations. We have met with Keith and critiqued his paper. We support his long hours of research and service to his community. P20-2

A water conservation survey needs to be completed as part of further DEIR analysis. To our knowledge no such survey exists in the DEIR (or elsewhere) showing what percentage of the P20-3

Prohibition Zone (PZ) has water efficient fixtures/appliances. Where is the critical data on current conservation measures? What is the arena for this evaluation and analysis to take place? How can assumptions and planning be made with lack of base line date? Such a survey would play a significant role in analyzing the potential significant impacts on the environment.

Based on these findings and lack of surveys one can make a reasonable assumption that there is a potential significant negative environmental impact. The DEIR does not offer sufficient mitigation alternatives to this potential negative environmental impact. It is widely accepted that intensive water conservation is highly important.

Traditional low flow toilets will help with conservation. Dual flush, high efficiency toilets will allow an even greater reduction of water use. Caroma high efficiency dual flush toilets can conserve approximately 3800 gallons per year per home over a low flow 1.6g toilet. Much greater savings are realized over traditional 3.5g toilets. Beyond dual flush toilets is composting toilets that require no water. Composting toilets should at a minimum be referenced in the DEIR in order to increase awareness of this viable technological option. We realize there may be barriers to implementing composting toilets. However, we strongly urge the county to consider implementing composting toilets in a number of test cases. These test cases can be observed, monitored, maintained and regulated for research, learning and public awareness and outreach.

P20-3 CONT

Another important factor in conservation is an aggressive campaign in updating water appliances, shower heads etc. With proper financial incentives and planning, many outdated appliances can be replaced. It is quite common for local governments, manufactures and utilities such as PG&E to offer rebates. Water demand for laundry use alone could be cut in half to two-thirds in each household that is retrofitted. Older top load machines can use over 50 gallons per load, new front load machines use as little as 16 gallons per load. High efficiency machines also use much less detergent. The DEIR does not fully address updating water appliances and should place more emphasis on this option with detailed plans of action. Again, baseline data is needed for proper evaluation of environmental impacts.

For homes that already have low flow toilets and/or high efficiency laundry machines the county could offer a “menu of options” for conservation using the allotted dollar amount per home. Other choices could include efficient dishwashers, hot water circulators etc.

The DEIR does not analyze, nor emphasize gray water use. We request the analysis and evaluation of gray water in regards to its potential environmental impact on this project. Gray water technology has potential to reduce ground water pumping demand. Gray water can effectively be diverted to on lot subsurface landscape irrigation. Typically laundry drainage is easily accessible, thus reducing costs to install, and gray water is permitted in San Luis Obispo County. In addition to reducing pumping demands on potable water, gray water provides a recharge element for the basin. Reuse of gray water reduces the pumping costs and flows of wastewater to the treatment site.

P20-4

Treated effluent used in agricultural exchange has mention in the DEIR but is not included in the charts or tables for planned effluent reuse. Spray fields play too large a role in effluent disposal, versus reuse. This is another area where significant environmental impacts could occur. Effluent reuse must benefit the basin. It is important that this treated effluent be utilized as a valuable resource and not simply sprayed onto grasses that are planned to be cut and disposed of at Cold Canyon Landfill. The DEIR states the cutting and disposing of the grass will occur several times a year. This is a tremendous waste of water resources, truck miles to and from the landfill, and associated traffic congestion and air pollution. Please analyze cradle-to-cradle opportunities as related to the water resource. If spray fields must be used, the crops grown could be composted on site or, crops could be grown for biofuels, feed or fodder. P20-5

Ideally, all treated effluent returns to the basin for reuse or recharge. If sufficient recharge options are not immediately available in the basin, then the treated effluent should be applied to agricultural exchange. Farmers can use the treated effluent with its inherent beneficial nutrients on viable economic crops. This eliminates the cutting and disposal aspects of the spray field option. Farmers and growers using the treated effluent are able to reduce their pumping demands on the Los Osos aquifer. This reduced pumping helps alleviate salt-water intrusion, and balance the basin. P20-6

We believe conservation, appropriate technologies and LID strategies can reduce a negative environmental impact during peak wet weather flows and also that these strategies have not been fully analyzed in the DEIR. We request proper analysis into the mitigation of peak wet weather and flow loads incorporating appropriate technologies, and LID.

The implementation of LID technologies needs more emphasis in the DEIR. Many miles and thousands of square feet of what are now impervious surfaces will be removed or disrupted. These impervious surfaces can, and should be replaced with pervious paving/surfacing options that would allow storm water to percolate and recharge the Los Osos basin. As rights of ways are more clearly identified and utilized for the LOWWP, and as final design begins we encourage the use of pedestrian walk ways, community areas, buffer strips, and other multifunctional landscapes that utilize impervious surfaces, bio-swales and other LID techniques that can reduce storm water runoff and increase basin recharge. The City of Seattle has had success securing large grants for this type of strategy, specifically using LID strategies in conjunction with the installation of the collection system. The Central Coast LID Center could prove to be a key partner in this type of strategy. The CC LID's Darla Inglis has had success obtaining large grants for Seattle and implementing this type of strategy. P20-7

Storm water is a growing area of concern with state water boards and environmental groups. The County has a unique opportunity with the LOWWP, in working with other departments and agencies to surge forward in progress with storm water management and LID strategies.

We strongly recommend the use of abandoned and cleaned septic tanks for rainwater catchments vessels/vaults. Gutters and impervious surface areas can be directed to the abandoned septic

tank. Rainwater can then be allowed to flow passively to the abandoned leach field/pit, thus recharging the basin. The rainwater could also be pumped from the septic vault to other onsite areas for landscaping irrigation. Rainwater is captured and redirected to the basin for recharge. Storm water runoff is greatly reduced.

P20-7 CONT

As the purple pipe is brought back through town, the treated effluent from the purple pipe could be used for irrigation at nearby schools, parks, and public rights of ways along the purple pipe corridor. This may require tertiary treatment.

We request that there is analysis of the compatibility between intensive water conservation and all proposed systems. Is there evidence that certain types of systems, by their design, require higher water flows? Any proposed system must allow the community to aggressively pursue water conservation in the future."

P20-8

The County, as lead agency has an opportunity for the advancement of progress in protecting the National Estuary and the Los Osos basin. We highly encourage the County to take aggressive steps toward intensive water conservation and reuse programs in an integrated approach. We encourage the County to implement innovative LID strategies that maximize protection and conservation of our resources.

P20-9

<u>In summary we request a proper analysis of these technologies/strategies and their potential environmental impacts:</u>

- Delaying of water conservation goals to the year 2020 versus immediate implementation of intensive water conservation, please include full analysis on salt water intrusion
- Establishing baseline water conservation data through surveys and water audits
- Composting toilets (at a minimum, create limited test sites for research, outreach)
- Gray water use (at a minimum, laundry hookup, subsurface on lot irrigation)
- Rain harvesting, gutters directed to abandoned septic tanks/leach fields for passive recharge, please include analysis of impact during peak wet weather flows and loads
- Rain gardens, bio retention swales, multifunctional LID landscapes, and pervious surfaces, please include analysis of impact during peak wet weather flows and loads
- LID strategies implemented in conjunction with collection system installation
- Analysis of the compatibility between intensive water conservation and all proposed systems.
- Effluent reuse for economically viable agricultural exchange

P20-10

Per the DEIR, page 5.2-5, section 5.2.3a-b, "…according to CEQA Guidelines…would the project: substantially deplete…or otherwise substantially degrade water quality". There is

the potential that not implementing the technologies suggested above may result in substantial depletion or degradation of water quality, a significant environmental impact.

P20-10
CONT

SLO Green Build - Technical Committee, January 30, 2009 (Letter P20)

Response to Comment P20-1

This comment requests that aggressive conservation measures should begin immediately. See Topical Response 9, Water Conservation Measures,

Response to Comment P20-2

This comment expresses a desire for reevaluation of the basin balance calculations. The commentor's estimated volumes are so noted. The Draft EIR utilized the available groundwater basin studies conducted for and funded by local and State agencies to facilitate its impact analysis. Information compiled by these same studies was used by the County design team in the development of the project Fine Screening Analysis and final design of project components. The hydrologic budget developed as part of the modeling efforts used for project design is believed reasonable. It appears the commentor believes a double listing of flow components is necessary in Table 2 in Appendix C of Appendix D-2. However, the summary of water budget components listed in Tables 8, 9, and 10 of Appendix D-2 accounts for all the components identified by the reviewer and listed only once in Table 2 in Appendix C of Appendix D-2. The recharge amounts listed on Page 6 and Tables 8-10 of Appendix D-2 are consistent with inflow/outflow values listed in Appendix C of Appendix D-2.

Contrary to the commentor's statement, the recharge amounts listed on Page 6 and Tables 8-10 of Appendix D-2 are consistent with inflow/outflow values listed in Appendix C of Appendix D-2. See Response to Comment A8-55 and P41-4.

It is unclear exactly what the commentor intends by the statement which combines the reference to 3 significant sources of recharge to the aquifer system (rainwater, irrigation return flows, and septic return flows) with the quote "…minor part of overall water budget" (page 4). This quote listed from the Yates and Williams report actually refers to the model refining exercise which required groundwater boundary flow redistribution among new boundary cells when the model was rediscretized. Subsurface aquifer interaction (i.e., upper aquifer seepage as recharge to the lower aquifer, or creek compartment seepage into the upper and lower aquifer) are actually a major part of the overall water budget. To simplify the hydrologic budget in a manner that eliminates these water recharge sources as suggested by the commentor would over simplify the accounting of the groundwater flow budget and create greater inaccuracies.

Response to Comment P20-3

This comment expresses a desire for a water conservation survey to be completed. See Topical Response 9, Water Conservation Measures, regarding what measures will be implemented.

Response to Comment P20-4

This comment expresses a concern regarding the lack of discussion and analysis on gray water use. See Topical Response 3, Water Resources and the Project Scope, regarding the water supply balance and groundwater replenishment.

Response to Comment P20-5

This comment expresses a belief that sprayfields play too large a role in effluent disposal, versus reuse. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P20-6

This comment expresses a desire for the treated effluent to be applied to agricultural exchange. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P20-7

This comment expresses a desire to further analyze Low Impact Developments to reduce potential groundwater pumping. The proposed project includes the development of infrastructure for a wastewater collection, treatment and disposal system. Conservation measures have also been included to achieve the target 10 percent per capita water conservation rate, as outlined in Section 2.4.5 Conservation Considerations. These measures are part of a water conservation program, which is a Low Impact Development strategy. See also Topical Response 10, Infiltration, Inflow, and Exfiltration; and Topical Response 11, Construction and Post-Construction Stormwater; and Response to Comments A4-11 and A8-90.

Response to Comment P20-8

This comment requests that an analysis be completed regarding the compatibility between intensive water conservation and the proposed systems. See Topical Response 9, Water Conservation Measures, regarding the measures that will be implemented, and the expected water demand and wastewater generation savings.

Response to Comment P20-9

This comment states that the County, as the lead agency has an opportunity for the advancement expresses a desire for the County to take aggressive steps toward intensive water conservation and reuse programs. It should be noted that the County is not a water purveyor in Los Osos and therefore has limited independent authority to adopt water use mandates. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P20-10

This comment requested an analysis of various technologies and strategies and their potential environmental impacts. See Topical Response 9, Water Conservation Measures, regarding water conservation goals including the replacement of existing toilets. See Topical Response 3, Water Resources and the Project Scope, and the scope of the proposed project. Furthermore, see Response to Comment P20-7 regarding measures that will be implemented with the LOWWP that are part of a water conservation program, which is a Low Impact Development strategy. Finally, the comment stated that if the technologies that are suggested above in their comment, a substantial impact to water quality would occur. As discussed in Impact 5.2.B in Appendix D-1, the proposed project would

include the long-term removal of a source of groundwater contamination (i.e., from the existing septic tanks) and result in a beneficial impact on groundwater quality.

Mr. Hutchinson,

This note is in response to the EIR which is currently being reviewed for the Los Osos Wastewater Project (LOWWP).

Since water is a very limited resource in our County the effluent from the LOWWP should be put to public use. The best Public use would be to have the water reintroduced into the ground water basin under the Los Osos Community. Therefore, the EIR should fully discuss this option and recommend the implementation of the reuse of the water within the Community.

P21-1

Terence K. Orton
PE 21,897 (Expires 9-30-09)
Westland Engineering, Inc
3480 S. Higuera St. Suite 130
San Luis Obipo, CA 93401

(805) 541-2394

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Terence K. Orton, January 30, 2009 (Letter P21)

Response to Comment 21-1

This comment expresses a desire for the treated effluent to be put to public use or reintroduced into the ground water basin. It should be noted that the maximum reasonable amount of effluent is being re-introduced at the Broderson site. Because there are no comments on the contents of the Draft EIR, no further response is required.

MORRO BAY NATIONAL ESTUARY PROGRAM

January 30, 2009

Morro Bay National Estuary Program Comments on the LOWWP DEIR

The Morro Bay National Estuary Program (MBNEP) supports the effort led by the County of San Luis Obispo to build a wastewater treatment system for Los Osos. A solution to the ongoing pollution of the aquifer is long overdue. The clear need to improve wastewater treatment in Los Osos was identified almost thirty years ago, and it was included as a priority in the Morro Bay National Estuary Program's Comprehensive Conservation and Management Plan when that plan was completed in 2000.

Construction and operation of a wastewater project is a major undertaking that will have both short and long term environmental impacts. The DEIR does a thorough job of identifying potential impacts and addressing those impacts through avoidance, minimization, and mitigation measures. Further measures to reduce impacts will likely follow from the permitting requirements as the project proceeds. P22-1

The similarities between the four 'top level' alternatives described in the DEIR greatly outweigh the differences between them in terms of environmental impact. This does not suggest that there are not important differences, nor that environmental considerations and CEQA should not be primary drivers of the final project. It does however provide the community and the Board of Supervisors with some flexibility to consider costs and community preferences without sacrificing environmental considerations.

Specific comments, questions, and suggestions on the DEIR follow. Thank you for your consideration and responses to these comments.

Sincerely,

Daniel Berman

Daniel Berman
Program Director
Morro Bay National Estuary Program

601 EMBARCADERO, SUITE 11 MORRO BAY, CA 93442
PHONE 805/772-3834 FAX 805/772-4162 www.mbnep.org

3-431

1. **Tertiary Treatment.** The MBNEP suggests that the water that is returned to the community for disposal and reuse should receive tertiary treatment. The community needs to reuse as much of this water as possible to address a critical water shortage, and tertiary treatment expands the options for additional reuse now and in the future. The recharge of the aquifer via Broderson disposal may require tertiary treatment depending on future public health regulations and the legal distinction between 'disposal' and 'recharge. It seems clear throughout the long history of the Broderson disposal option that recharge of the groundwater has always been the intended benefit. P22-2

   Reuse of wastewater faces serious negative perceptions, and additional treatment will help address those concerns. Tertiary treatment also greatly improves the potential for exchange and reuse agreements with the agricultural community. The trade off is one of increased cost both for construction and operation, and of increased energy use. The DEIR should lay out those costs and benefits in greater detail rather than dismissing tertiary treatment as unnecessary.

2. **Spray fields** Spray fields should be seen as a short term necessity, but because of their negative impact on the groundwater resource problems in Los Osos, they should not be relied on as a long term approach. They also need careful design and ongoing management to prevent nutrient enrichment of the waterways.

   a. The DEIR identifies much of the proposed spray field area as Cropley clay soils with low percolation rates. Calculations presented suggest that this will not be a problem, but field tests of actual percolation potential should be conducted through varying seasons to confirm the average rates provided in the DEIR. The experience of the landowner and adjacent landowners in managing irrigation and drainage issues should be solicited. P22-3

   b. There are multiple seasonal drainages running through the proposed spray fields area. The DEIR describes buffers to avoid contributing effluent to these drainages, it would be helpful to see a clear figure and analysis showing those buffers in place and examining what effect they have on the spray field design. The required WDR will likely require such analysis; it might as well be done now. Some of these drainages currently show signs of erosion and lack of riparian vegetation. The project could improve riparian condition in these areas through erosion control and revegetation efforts as mitigation for impacts elsewhere. P22-4

   c. The DEIR also describes altering the drainage of the area to collect and return any runoff from the spray fields. The goal of preventing such runoff from entering the creek system is valid, but the concept also raises concerns. Such a system will alter the current hydrology, and will collect P22-5

substantial precipitation during the wet season. It seems like it will need to allow wet season runoff to flow into the creeks, without concentrating it to an extent that will cause erosion. This should be addressed. P22-5 CONT

d. The flood plain map (Appendix E, Fig 5.3-1) does not show any flooding out of the seasonal drainages that run through the Tonini property. This may be an artifact of the flood zone mapping more than a guarantee of no flooding. Discussions with the ranch owner and neighbors as well as visual inspection in the field should be pursued to investigate the likelihood of flooding from those drainages. P22-6

e. The DEIR mentions landfill disposal of the grass grown under the spray fields. Is there a prohibition or concern about using this grass for cattle forage? P22-6

3. **Visual Resources.**
For the Tonini site especially, the construction of a major industrial facility in this beautiful, rural, agricultural area with the Morros as a backdrop is unfortunate. If this site is chosen, all efforts should be undertaken to minimize the visibility of the facility from Los Osos Valley Road as well as Turri Road in both the day and night (e.g. lighting). A photographic rendering for the Tonini site should be provided from multiple points on Turri Rd as well as the provided view from LOVR. The impact will be especially significant and difficult to mitigate from Turri Rd. driving towards LOVR. The photographic perspective provided in the Visual Resources Appendix for the Cemetery area sites should include a photo from westbound LOVR approaching the Cemetery in addition to the perpendicular angle provided. (similar to the angle provided for Tonini). From the information provided in the DEIR, it appears that siting the treatment facility at the Cemetery area sites would have less visual impact than at Tonini, especially when the view from Turri Rd is considered. P22-7

4. **Other Plant Siting Considerations.** Treatment plants are likely to experience sewage spills. The facility design should explicitly identify where in the treatment process spills are most likely to occur, design to avoid these spills, and plan to contain spills that do occur. The proximity and relative elevation of the Cemetery area treatment plant sites to Warden Lake are a concern in this regard. The facility would be perched on a plateau immediately adjacent to this important wetland resource, and the space limitations of the sites, combined with elevation drop and proximity, would appear to make it more difficult to prevent spills at these sites from reaching waterways than conditions at the Tonini site. The Facultative Ponds technology, and the proximity between storage ponds and the facility, both help address this important issue. P22-8

5. **Agricultural Lands** P22-9

The mitigation measures regarding agricultural land propose conservation easements off site. Such easements should be held by an entity which has experience with such easements, has preservation of agriculture as a mission, and is distinct from the County. All efforts should be made to acquire these conservation easements within the Los Osos Valley along the eastern edge of the Los Osos community to protect those lands most at risk due to the potential future spread of the community into the agricultural valley.

P22-10 CONT

In addition to the off-site easements, under all of the proposed projects the remainder of the Tonini property needs to be permanently protected via a conservation easement. This should be an additional required mitigation measure, not a part of the currently proposed easement acreage. This easement should allow only agriculture, require Best Management Practices for that agriculture (NRCS and UCE can provide expert oversight on BMPs), and should prohibit subdivision of the property. This should apply to all areas of Tonini not utilized for the project, and should be designed to include the spray fields in the event they are downsized in the future through additional reuse opportunities. Such easements should be held by an entity separate from the County which has preservation of agriculture and conservation of resources as a primary mission.

6. Growth Inducement.

Where the conveyance pipeline between the service area and the treatment facility crosses private property, it may provide those properties with increased argument and legal standing to hook up to the system, which could increase the development potential on their (rural) property. Right of way easements for the collection system should explicitly address this issue to reduce this potential. These could be in combination with the easements discussed in #4 above.

P22-11

7. Collection System

The DEIR identifies both STEP/STEG and gravity as viable collection system alternatives, with differing positives and negatives. The MBNEP supports the County's approach to use the community survey and the Design-Build bid process to assist in making the most informed decision between these options. We concur with the Los Osos TAC and the DEIR that with proper design, construction, operation, and maintenance, either system would work. The varying impacts of this choice need to be clearly communicated to the residents and their preference should be heard as the systems vary widely in terms of construction and ongoing maintenance impacts affecting residents.

P22-12

If a gravity system is built, the construction work to the road network provides a substantial opportunity to integrate stormwater measures and 'Low Impact Development' measures designed to infiltrate stormwater into the ground as opposed to channeling it to the Estuary. The MBNEP encourages the County to pursue these options and offers our assistance in that effort. P22-12 CONT

8. **Water Conservation**
   Los Osos has significantly damaged its sole water supply, first by contamination of the upper aquifer and now, partly as a result, by overdraft of the lower aquifer causing active and rapid salt water intrusion. Aggressive water conservation is far and away the most cost effective approach to solving this problem, and it can be pursued immediately. The proposed conservation effort in the DEIR should be viewed as a good starting place, but even more ambitious efforts are needed. P22-13

9. **Treatment Technology**
   The near elimination of biosolids disposal is a significant environmental benefit of the Facultative Ponds treatment approach. The capacity of a PMFP system to stabilize treatment plant flows is also an important benefit to reduce potential spills. The revised GHG emissions analysis suggests that this alternative may not be the most energy efficient due to additional nitrification/denitrification processes, but see the question raised in 8(b) below. P22-14
   Regardless of site and technology, the treatment facility should incorporate current LID/stormwater design to capture and infiltrate runoff from the facility.

10. **Greenhouse Gas Emissions**
    a. Are the energy costs to pump treated effluent to Broderson included in the GHG emissions analysis? They would apply equally to all projects, but would still inform the total operational impacts and comparison with the AB32 standard. Please highlight where these emissions are included in the analysis, or if they are not, please update the analysis and conclusions accordingly. P22-15

    b. Are the GHG emissions associated with biosolids processing and disposal included in the GHG emissions analysis? The Facultative Ponds treatment produces much less biosolids, with a resulting reduction in long distance truck traffic. Please highlight where these emissions are included in the analysis, or if they are not, please update the analysis and conclusions accordingly. P22-16

    c. Another possible error in Appendix K: Appendix B says that PMFP with a STE collection system will require more methanol as a carbon source P22-17

for nitrification/denitrification processes due to 3.5 times higher nitrogen in the incoming flows (app B pg. 5-7, last paragraph). The table in Appendix K pg. GHG-8 shows identical methanol inputs and therefore GHG consequences of projects 1 and 4. This table feeds into the summary analysis of GHG emissions. This appears to be an inconsistency.

P22-17 CONT

d. The standard used in the DEIR for assessing the significance of GHG emissions effectively ignores all construction emissions as inherently insignificant, since AB32 compares 1990 emissions with 2020 emissions. (App K, pg 5.9-69, paragraph 2) This seems like a clear example of following the letter of the law and not the spirit, and it would be unfortunate if this becomes the standard analysis approach for CEQA. The law was enacted because GHG emissions create long lasting disruptive effects on our climate. It is cumulative emissions over time that causes the problem. In this project, the differences in construction emissions between projects are relatively small. But as a CEQA approach, it seems misguided to only consider differences in ongoing operational emissions and ignore differences in **total** (short and long term) GHG emissions between project alternatives.

P22-18

Morro Bay National Estuary Program, Daniel Berman, January 30, 2009 (Letter P22)

Response to Comment P22-1

This comment expresses support of a wastewater treatment system for the community of Los Osos led by the County of San Luis Obispo. Thank you for your comment. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P22-2

This comment requests that the cost and benefits of tertiary treatment should be provided in greater detail. See Topical Response 3, Water Resources and the Project Scope.

Response to Comment P22-3

This comment expresses a concern regarding irrigation and drainage issues associated with Cropley clay. See Response to Comment A5-4 and P15-2.

Response to Comment P22-4

This comment suggests that riparian conditions may be improved through erosion control and revegetation. A layout of the proposed sprayfields, including buffers, is provided in the Preferred Project Description (Appendix Q.3). Many areas of the drainages crossing the Tonini site have been impacted by land use practices over the years. Consistent with the requirements of the Local Coastal Plan, these drainages will be managed to maximize their value as coastal streams. As several will be impacted by pipeline crossings, these areas will provide space to implement full mitigation for project riparian zone impacts.

Response to Comment P22-5

This comment expresses a concern regarding wet season runoff. More recent analysis of the Tonini site (Appendix Q.6) shows that the sprayfields will need to be operated based on evapotranspiration only, assuming no percolation. A consequence of the lower application rate will be that containment berms or other significant alteration of the drainage on the site will not be required. The only such treatment might consist of contour plowing. As a result, we do not expect that the natural surface flow into the creek will be altered. It should be noted that restoration and revegetation of the creek setback areas should provide substantial water quality and sedimentation improvements to the creeks on the site.

Response to Comment P22-6

This comment expresses a concern regarding the accuracy of the flood zone mapping that was used. The initial review of the Tonini Site has involved landowner discussions as well as calculation of the 100 year floodplain specific to the site. Those reviews show that the creek is expected to flow out of its banks during a 100 year event; the floodplain edge at the treatment plant site is at or near the 100 foot setback line. As the design progresses, consideration of the need to add additional flood protection will be reviewed, including the inclusion of a landscape berm along the east side of the plant site to enhance both the visual appearance of the facility as well as flood protection.

Response to Comment P22-7

This comment raises the question raises the question about whether or not grasses grown on the sprayfields can be fed to cattle or just hauled to the landfill. Because the level of treatment of the wastewater is secondary, it does not comply with state regulations for secondary uses, such as fodder crops.

Response to Comment P22-8

This comment is concerned with visual impacts, and suggests that visual impacts associated with the treatment plant would be lower at the Cemetery site compared to the Tonini site. The comment also indicates that another photo should be taken of the view of the Cemetery sites from westbound LOVR, in addition to the perpendicular photo depicted in the Draft EIR.

Section 5.12 of the Draft EIR includes analysis of impacts to visual resources, and impacts of the proposed project to the site and its surroundings are evaluated on pages 5.12-33 through 5.12-35. With regard to impacts of the treatment facility effects are considered significant for all four proposed projects. Exhibits 5.12-5 and 5.12-6 show the facility as it would appear when sited on the Giacomazzi and Tonini parcels, and in both simulations the treatment facilities would be noticeable to passers-by. The LOVR, from which the Giacomazzi and Tonini parcels are visible, is part of a designated scenic corridor. The Cemetery parcels and the Tonini parcels are part of an existing rural landscape. When these factors were considered together it was concluded the impacts were significant for all four proposed projects.

Regarding the comment about the need for additional photo documentation, more photos were not taken since the existing photos clearly demonstrate the simulated facility would be noticeable from existing photo points and would result in significant impacts for all four proposed projects under the CEQA checklist evaluation criteria "c" (substantially degrade visual character of the site and surroundings?) and "e" (affect views from Los Osos Valley Road?).

Response to Comment P22-9

This comment expresses a concern about spills or overflows during operation of the wastewater plant at sites like the Cemetery which are located near existing creeks or lakes and the runoff could pose environmental impacts to those bodies of water. We agree with the comment and that was one of many factors on not selecting projects 1 through 3.

Response to Comment P22-10

This comment makes two points. The first point is that any agricultural conservation easements developed off-site should be held by entity with experience with this type of easement. The comment also states that the remainder of the Tonini parcel (not used for the treatment facility/sprayfields) should be permanently protected under an agricultural easement.

Regarding the first point, the entity that will hold the agricultural conservation easement has not yet been decided. Regarding the second point, refer to *Response to Comment A5-3* (response to the

fourth point. Regarding the second point, on page 5.11-37 in the expanded Agricultural Resources section, it is stated that mitigation will occur at a ratio of at least 1:1 for direct impacts, and at 0.5:1 for indirect impacts. Also on page 5.11-37 the size of the conservation easement is detailed under Mitigation Measure 5.11A-1.

Response to Comment P22-11

This comment is concerned that the proposed conveyance line would cross private property and result in potential growth inducement and therefore the project should require right-of-way easements. The conveyance line between the service area and the Tonini site would extend within a roadway right-of-way and not cross private property, thus not requiring right-of-way easements.

Response to Comment P22-12

This comment states that the varying impacts of the alternative collection systems need to be clearly communicated to residents and their preference should be heard as the systems vary widely in terms of construction and ongoing maintenance. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P22-13

This comment expresses a desire for additional conservation efforts to be incorporated. See Topical Response 9, Water Conservation Measures, wastewater generation savings and measures to be implemented.

Response to Comment P22-14

This comment expresses a concern and recommends current LID/stormwater design to capture and infiltrate runoff from the facility. Concur with this comment and it is incorporated into the design-build specifications for the project. See Topical Response 9, Water Conservation Measures; and Topical Response 11, Construction and Post-Construction Stormwater; and Response to Comment A4-11 and A8-90.

Response to Comment P22-15

This comment asks if GHG emissions from energy costs to pump treated to Broderson were included. Energy estimations in the Draft EIR included all aspects of energy usage including energy used to pump to all effluent disposal sites. Refer to Section 5.9 and Appendix K of the Draft EIR.

Response to Comment P22-16

This comment asks if GHG emissions associated with biosolids processing and disposal were included. The Draft EIR did include GHG emissions associated with biosolids processing and disposal. Refer to Section 5.9 and Appendix K of the Draft EIR.

Response to Comment P22-17

This comment expresses that there seems to be an inconsistency in methanol between Appendix K and Appendix B. Projects 1 and 4 in appendix K have identical methanol inputs because both approaches to treatment (STEP/STEG and facultative ponds) result in substantially less carbon

available for process. STEP/STEG removes the carbon at the tank; facultative ponds drop the sludge, and consequently the carbon, into the bottom of the pond where it is not available for the nitrification/denitrification process. If the pond included a mixing process, as would be the case with Partially Mixed Facultative Ponds, then some of the carbon loss impact could be mitigated. However, as all pond systems do not include this component, the EIR is appropriately conservative; the additional carbon amount required with a conventional pond system is similar to that of a STEP/STEG collection system. See also the response to comment A8-127.

Response to Comment P22-18

This comment expresses questions regarding consideration of construction GHG as insignificant. See Response to Comment A9-8 regarding significance determination.

January 30. 2009

Mark Hutchinson

Re: Los Osos Wastewater Project
Comments on Draft EIR

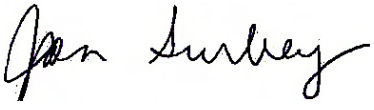
The mission of the Morro Coast Audubon Society (MCAS) representing 900+ members county-wide is "***To promote the appreciation, conservation and restoration of ecosystems, focusing on the biological diversity of birds, other wildlife, and their habitats, particularly in San Luis Obispo County.***" MCAS owns several properties in Los Osos, the most popular and well known being Sweet Springs Nature Preserve, which MCAS estimates receives over 1000 visits per month. Since the health of our properties depends on finding a solution to the ongoing pollution of the aquifer, MCAS supports the effort to build a wastewater treatment system for Los Osos.

While the Draft EIR states that the construction and operation of the wastewater project will have both short and long term environmental impacts, these impacts are thought to be able to be avoided, minimized, and mitigated to the point where the benefits of the project clearly outweigh the impacts. MCAS works in close collaboration with the Morro Bay National Estuary (MBNEP), and supports the more detailed comment letter submitted by Dan Berman, MBNEP Director. While MCAS is concerned about all aspects of the proposed project, our comments will be limited to the biological impacts as those are the portion of the project encompassed by our mission. P23-1

As such, MCAS realizes that during construction of any of the proposed alternatives, there will be disturbances to the habitat and therefore to the species utilizing this habitat. MCAS agrees with the findings of the Draft EIR that ultimately, after the construction is complete and the wastewater treatment system is functional, the status of the biological resources will, in fact, be improved compared to the current status.

MCAS requests that the identified impacts be avoided, minimized, and mitigated according to the Draft EIR recommendations. Further, MCAS wishes to be acknowledged as an interested party and notified of future developments regarding this project.

Sincerely,



Jan Surbey
MCAS President

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Morro Coast Audubon Society, Jan Surbey, January 30, 2009 (Letter P23)

Response to Comment 23-1

This comment expresses a request that identified impacts be avoided, minimized, and mitigated according to Draft EIR recommendations. It should be noted that all applicable mitigation measures will become County commitments and conditions of approval of various permits, including the Coastal Development Permit. Because there are no comments on the contents of the Draft EIR, no further response is required.

From the Desk of Julie Tacker
P.O. Box 6070, Los Osos, CA 93412

County of San Luis Obispo
Department of Public Works
1050 Monterey, Room 207
San Luis Obispo, CA 93408

Attention: Mark Hutchinson

January 30, 2009

RE: DRAFT ENVIRONMENTAL IMPACT REPORT, COUNTY OF SAN LUIS OBISPO, LOS OSOS WATERWATER PROJECT (LOWWP)
State Clearinghouse No. 2007121034

Dear Mr. Hutchinson,

As a longtime resident, homeowner, business owner and former elected official in Los Osos my comments and concerns on the Los Osos Wastewater Project Draft Environmental Impact Report are meant to be constructive. I am hopeful to shape the project in a favorable way.

Please feel free to contact me with any questions or clarifications.

Sincerely,

Conservation Considerations

The document suggests the project would "Mandate that property owners retrofit their bathrooms with all low-flow fixtures, including toilets prior to hooking up their buildings to the sewer."

How would such a program be implemented? It is our experience at 528-FLOW that a bathroom package (i.e. High Efficiency Toilet, low-flow showerhead and faucet aerator) installed by a licensed plumber can cost approximately $500.00 per bathroom. Most homes have two bathrooms; this is additional to the exterior costs associated with hook-up (depending on the collection system chosen for the project the on-lot costs could be significant).

P24-1

It is also our estimate that to retrofit the necessary homes in Los Osos within the project area will cost approximately $3.5 million, the line item in the Fine Screening report is insufficient in that regard.) I am of the opinion, an ordinance with staff available for enforcement is necessary to "mandate" fixture retrofit. The administrative costs are unknown.

From the Desk of Julie Tacker
P.O. Box 6070, Los Osos, CA 93412

Revegetation at Broderson

The mitigation measure in the County's DEIR is not only costly to the wastewater project initially, but also as reoccurring maintenance related to the project. This measure invites the Morro shoulderband snail back to the site that will have reoccurring disturbance as part of the leachfield maintenance. Beyond utility workers and engineers, biologists would also have to be employed to monitor the maintenance of the leachfield. To "take" on an ongoing basis seems counter productive to the species.

Success of the revegatation may be encumbered by the leachfield itself. Analysis of the Broderson leachfield omits statements made in the LOCSD 2001 FEIR related to the moisture content of revegetated plants near the leachlines (Bio-21, see Attachment I). P24-2

This leachfield may need emergency attention during early operation as the leachfield begins start up (could be years) which would disturb the newly planted habitat and may have no time to enlist the services of a certified snail biologist (i.e. nights, weekends, other emergency situations).

It is also a distinct possibility that the disposal method will change at that site in the future (i.e. dry wells) to revegetate the site restricts uses and may trigger the need for additional permitting (i.e. taking years and costing tens of thousands of dollars). P24-3

Why is California Native Plant Society referenced as an agency to oversee the revegetation? CNPS is not a governing body and as such should not be relied on as a source for approval of the mitigation at the Broderson site. P24-4

Groundwater Basin -- Aquifer Recharge

The current studies underway by the Los Osos purveyors (Los Osos Community Services District, Golden State Water Company and S&T Mutual), upper basin safe yield (Task I) and creek compartment analysis (Task II) should be completed and incorporated into the project before finalizing the EIR. The results may suggest additional opportunities for dealing with treated wastewater (i.e. summertime recharge in or at Los Osos Creek may be a tool for groundwater management). These studies are due back from the consultant in just a few months. These studies may trigger the need for costly amendments and/or supplemental documents. It seems prudent to wait and incorporate the results into the DEIR rather than proceed without the information. P24-5

Currently, the County's project defers groundwater management to the purveyors to perform infrastructure and pumping regime improvements. This methodology is flawed by the very fact that the purveyors are incapable of increasing rates to accomplish the tasks necessary to manage the basin safely. The simple fact that the LOCSD is a political body that will swing with the pendulum of "growth" or "no growth" may in fact keep the District from funding future management scenarios simply because improving water resources may lead to development. The District does not have land use authority and could restrain water resources to hamstring future development. We have witnessed resource constraints used to curtail development in the past, what is to keep it from happening again. P24-6

Furthermore, citizens in Los Osos are well aware of the 218 protest process and similarly to a failed rate increase in Cambria last year it is likely rate payers could halt the LOCSD from further increases, making if difficult to carry out improvements necessary P24-7

From the Desk of Julie Tacker
P.O. Box 6070, Los Osos, CA 93412

to secure a safe basin yield. Golden State Water Company has raised their rates over 50 percent over the last year, having begrudgingly gone through the difficult Public Utilities Commission process. This process will continue to be difficult for GSWC and may make improvements to the basin difficult to fund. P24-7 CONT

Biological Resources

Maritime Chaparral is omitted from the list of plant communities that occur and may be impacted within the project study area. P24-8

Additionally, the plan to excavate the Broderson site will take 12 acres not 8 acres as identified, including the access road to the leachfield. This was identified in the 2005 Coastal Commission Revocation Request and admitted by the LOCSD during the permitting process. What has changed? Why does the County only admit to 8 acres of disturbance at the Broderson site in this document? P24-9

The potential loss of habitat associated with the preferred project impacts on Red-legged frog would constitute the need for an additional Section 7 permit. P24-10

Page 5.5-12 paragraph 2

"If not properly constructed, operated and maintained, there is the potential for breakage and leakage in the pipelines of the collection system releasing ***untreated sewage*** *into the environment."*

This comment misstates the quality of wastewater that would be released in a STEP/STEG spill. STEP tanks perform primary treatment of wastewater, settling out solids. "Untreated" waste includes paper, grease, and kitchen waste while septic effluent does not. P24-11

Exhibit 5.5-2 Jurisdictional Waters/Wetland

The wetland map for the community is incomplete. Key wetlands were identified as part of the LOCSD project in 2005 that are not incorporated in this document. Furthermore, there are wetland indicators (new plants; i.e. willow and bog thistle are among them) at the Tri-W site, within the area identified for the preferred project lift station. P24-12

Additional surveys should take place at the corner of 18th St. and Paso Robles Ave., Los Olivos Ave. and Mountianview Ave., Pasadena Dr. and Santa Ysabel Ave., Doris Ave. and Rosina Ave. (near Monarch Grove Elementary School), on the South side of Ramona Ave. and Pine Ave. There are likely others that have been overlooked, as a suggestion, to overlay the flood prone area map will highlight likely wetlands. P24-13

Where there are wetlands there is need for dewatering. With dewatering comes Baker Tanks and the associated impacts of their unsightly staging. There is also the need to analyze impacts from the dewatering in those areas identified. P24-14

Related to the Tonini site, the Jurisdictional Waters/Wetland map fails to mark the westerly spring flowing down-slope into the proposed spray field area. For that matter, the document fails to adequately characterize the large drainage ways that cris-cross the P24-15

From the Desk of Julie Tacker
P.O. Box 6070, Los Osos, CA 93412

Tonini site and the risks associated with run-off from overspray and stormwater. Impacts would be realized ultimately in Morro Bay. Tonini Google Earth Arieal Photo, Attachment II, Drainage Concern photo, Attachment III, Drainage Concern, Attachment IV. P24-15 CONT

Level of Significance Prior to Mitigation 5.11.5

Identifies Table 5.12-1 and should identify 5.11-1 P24-16

Section 6: Growth Inducing Impacts

While land use principals and policies should drive development the public on the whole sees resource availability as a nexus to growth. It would be prudent to develop a "donut easement" or deed restrict the Tonini parcel and transmission lines to and from it to preclude any other services/uses be provided by the facility. For example, the Millennium High School in Watsonville California was required by the California Coastal Commission to develop what was coined "The Watsonville Straightjacket by coastal planner Steve Monowitz. (I can provide a copy of the staff report if necessary). P24-17

While not discussed in the body of the document, engineers for the County have stated in public meetings that the Tonini home site could be broken off in a "public lot" and sold to recoup money for the project. While this is a nice idea, it is growth inducing to the neighborhood and combines land uses that will no longer be appropriate (i.e. wastewater treatment and residential).

Wastewater Treatment Site Alternatives

This commenter objects to the similar sites used for this "co-equal analysis". The Cemetery, Branin and Gaccomazzi sites only differ slightly. The similarities of these parcels hardly provide alternatives for the community. To have been prudent the document would have analyzed sites with different profiles and a multitude of options. As written, the consultant short changes the County and the public a real alternatives analysis. P24-18

The Tonini site did not receive Technical Advisory Pro/Con analysis. This averted the public process set forth by the County for Los Osos residents to participate in. The Supplemental Notice of Preparation was released on June 30, 2008 just before the TAC went on summer hiatus. P24-19

Gorby – proximity to the LOCSD boundary alleviates growth inducing concerns. The site is visually screened by land formation and topography (nestled in a box canyon). The site is currently developed with barns and outbuildings that could easily be reused or redeveloped as part of a treatment facility. P24-20

The elimination of Gorby from co-equal analysis due to an "unwilling seller" should not drive public works away from analyzing the site (it doesn't in necessary projects as seen in the recent condemnation of Nacimento Pipeline conveyance).

From the Desk of Julie Tacker
P.O. Box 6070, Los Osos, CA 93412

The current Creek Compartment analysis being conducted by the purveyors may prove positive for the Gorby site in that its proximity to the creek and the Paso Formation surfaces there may prove beneficial for disposal of treated wastewater in either direct discharge into the creek or percolation ponds (lesser regulations) adjacent to the creek. Summertime recharge at that location should be considered. P24-21

Phasing of construction to begin treatment facility as a last phase would allow the Gorby's to stay close the existing equine business over 1-2 years. P24-22

Ag Reuse

The Tonini site is two miles beyond the Los Osos Groundwater Basin boundary, too far from the agricultural interest's ideal for reuse. Agricultural that should be targeted for exchange overlie the Los Osos Basin. To alleviate the current pumping, these farms should be provided treated wastewater for an lieu recharge scheme. P24-23

Public Agencies

Please clarify the context in which the following individuals were consulted: P24-24

The LOCSD has not employed Bruce Buel as General Manager since February 2006.

In conversations with LOCSD Utilities Manager, George Milanes, Mr. Milanes was never contacted by DEIR staff.

George Gibson left San Luis Obispo County Public Works staff in December 2006.

Environmental Coordinator, Ellen Rognas was married some 15 years ago, her married name is Carroll.

References

The 2001 LOCSD, Crawford, Multari & Clark FEIR was mentioned twice. P24-25

Visual Analysis

The visual analysis in Appendix N mistakenly states the Santa Lucia Mountains as the northern range from the setting of the project sites analyzed. The document overlooks the unique 1,000,000-year-old landmark volcanic Morros, stretching from Morro Rock to Islay Hill in San Luis Obispo, due north of the Los Osos Valley. These peaks are scenically protected in the Estero Area Rural plan. The Estero Area rural planning area recently underwent changes from the Board of Supervisors and was adopted by the California Coastal Commission on January 6, 2009. The new Area Standards in the rural Estero Area Plan adopted identify Los Osos Valley Road, Turri Road and South Bay Blvd. as Sensitive Resource Area's (scenic corridors). Reference document; Page 6-13 Estero Area Update, cites SRA and Scenic corridor, Board of Supervisors-Approved Plan, November 2004, Approved for Submittal to the California Coastal Commission November 2, 2004, Amended July 18, 2006. Also, please refer to P24-26

From the Desk of Julie Tacker
P.O. Box 6070, Los Osos, CA 93412

Estero Area Update and see July 10, 2008 Adopted Coastal Commission Staff Report (Th 16b). P24-26 CONT

With regard to the Tonini site, it is at the foothill of Hollister Peak, arguably the most scenic of the nine Morros volcanic peaks. Hollister Peak stands just over 1400 feet above sea level (see attached summary authored by Sierra Club, Attachment V)

The Morros Plan has been underway since the early 1970's (see attached covers A Specific Plan for Preservation of the Morros 1972, Morros Area Constraints Analysis 2001, The Morros Area Specific Plan 2004, Attachment VI). The combined effort of community members from Morro Bay, Los Osos (including Pandora Nash-Karner, 2003,) property owners within the Los Osos and Chorro Valley's, specific property owners in the Morros and consultants Crawford, Multari & Clark has generated thousands of pages of documentation in anticipation of the Morros Specific Plan be adopted by the Board of Supervisors and in light of the Ag and Open Space Element has not been adopted by the Coastal Commission the draft plan encourages conservation easements "in perpetuity". P24-27

Development of the Tonini site, even at ground level would have a visual impact, forever marring the hilly terrain with an industrial facility. Where no obstruction of surrounding scenery is today, it is arguable that the site developed at 22-32 acres in magnitude would in fact impact the visual serenity of the Tonini site.

To be credible, the DEIR preparer should be sent back to give a full visual simulation. Please provide a thorough analysis, including night-time simulation, before concluding there is no Class I impact. Take into account the views from all sides of the proposed facility, paying special attention to from the corner of LOVR and Turri Rd. where most traffic (average15,000 cars per day, SLO County Traffic Count attachment VII) would view the facility from. (Suggested vantage point photo attached attachment VIII). P24-28

The visual impacts of building a pump station to the Tri-W site are understated in the DEIR. The document suggests that the building (20'L x 10'W x 17'H) would blend into the neighboring architecture. It is unclear what neighborhood the building would reflect. The Red Barn, Los Osos School House, Skateboard Park, South Bay Community Center, Los Osos Library, St. Elizabeth Ann Seaton Catholic Church, Los Osos Chamber of Commerce and multi-family housing that surround the site are all very different in their architecture. The previous project at that site intended to build "wave wall" facades on the buildings, attempting to mask them as sand dunes, unlike anything in Los Osos. Placement of the pump station near Los Osos Valley Rd. would block a public view as recognized by the California Coastal Commission. The previous project at that site purposely attempted to bury buildings to avoid impeding public views. P24-29

Cultural Resources

The historical analysis of the Los Osos Valley is understated in its importance to the development of the California Mission system. The "Great Grizzly Hunt" that took place in the Los Osos Valley in 1772 is mentioned in Appendix H, from a historical perspective the impacts are arguably Class I and unmitigatable. P24-30

From the Desk of Julie Tacker
P.O. Box 6070, Los Osos, CA 93412

The Tri-W project was required to get approval signatures for the LOCSD"s cultural mitigation plan from the most likely descendants. Mary Trejo, Tribal Elder, refused to sign. Will the County have similar difficulty? P24-31

Air Quality

The Air Quality section of the document fails define the regime associated with decommissioning septic tanks. These impacts were deeply scrutinized in April 2006 by the Air Pollution Control District when analyzing the potential enforcement proposed by the Central Coast Regional Water Quality Control Board in relation to bi-monthly pumping of septic tanks of the entire Prohibition Zone. The impact to air quality of multiple truck trips was so burdensome that the CCRWQCB backed away from that proposed enforcement action. The impacts in decommissioning the community septic systems (regardless of the collection system chosen) will be significant. These impacts are stated in the transcript of the April 28, 2006 CCRWQCB hearing by APCD spokesman Larry Allen. P24-32

Decommissioning at a rapid rate must also be analyzed from a septage handling capacity. Currently the closest facility to accept septage is in Santa Maria, their facility has had recent incidents where haulers were turned away due to upsets in biology at the plant. It is important to analyze that plants ability to accept the septage from Los Osos septic systems and at what interval. P24-33

It is my recollection that the Tri-W project was to decommission the entire community over the course of one (1) year and that Santa Maria could not possibly accept it at that rate. The impact to the rest of the County was never analyzed as part of the Tri- W project, haulers will be less available to serve outlying parts of the County that use septic systems during this time frame. What are the impacts to those areas that will be underserved? P24-34

Construction Staging

The document fails to analyze or identify staging areas within the community. This same failure to analyze staging areas became a legal CEQA challenge in the Tri-W project spearheaded by Concerned Citizens of Los Osos. Neighboring property owners were outraged by early morning start up and late into the evening wind down of construction workers and equipment. P24-35

The document erroneously states that the LOCSD graded the "Walker" site on the corner of Pismo Ave. and South Bay Blvd., that work was done by the property owner and/or the Montana based contractor who leased the property for staging. That grading became part of an enforcement investigation; I do not know the outcome.

Staging of Baker tanks for dewatering of trenches was not analyzed in the document. Staging these large tanks in neighborhoods with high groundwater is of concern; these neighborhoods tend to have narrow streets and few vacant parcels to stage on (should the project get permission from the owner and/or clearance from USFWS). P24-36

From the Desk of Julie Tacker
P.O. Box 6070, Los Osos, CA 93412

These tanks are large and would obstruct views for both traffic and those of the scenic neighborhoods in which high groundwater tends to be the case i.e. Cuesta-by-the- Sea, Pasadena Dr., El Moro Ave (school crossings), among others. P24-36 CONT

Water removed from trenches is likely polluted by septic effluent (thus the need for the sewer i.e. CCRWQCB). What will be done with the polluted groundwater? There was use of that water during construction by for dust control during the Tri-W project, if the water is indeed polluted by septic runoff, then the water would need treatment before any dust control uses were implemented. Certainly testing of the water for pathogens would be prudent. P24-37

Noise

There is little ambient noise at the proposed treatment site currently, especially at night. Most noise at the site is associated with seasonal use of tractors and harvest equipment.

During construction there will be tremendous noise and once construction is complete there will be ongoing noise associated with pumps and aeration and the mowing of grass associated with the spray fields. There will be continuous hum from equipment 24 hours per day. This is significant to the neighbors and to the visitors that enjoy Turri Road and should be considered a Class I impact of the project. P24-38

Land Use and Planning

The recent adoption (January 7, 2009, California Coastal Commission, Oceanside, CA, took final action) of Title 23 changes need incorporation into the DEIR. Please see July 10, 2008 Adopted Coastal Commission Staff Report (Th 16b). P24-39

Additional Concerns

While the DEIR speaks to Environmental Justice and there being no significant impact. I would like to draw attention to the business community of Los Osos. No matter the household income of some 4,769 homes faced with funding the project, all will have $250+/- per month less disposable income. That translates to some $15 million per year taken out of the Los Osos economy. Businesses already struggling to cover on-lot and hook-up costs, will also be faced with the monthly costs and an extreme hit to their daily profits as residents spend less in their establishments as they struggle to make their own ends meet. Please consider this request to seek small business subsidy funds to assist the local economy through the financial crisis they will face. P24-40

SD has eliminated the leach field site.

t Habitat. The Morro endangered species. n seen in the project ial for this species to (Class I). Refer to the

Powell property as a and no mitigation is

ong with mitigation he impact to a level of

Prepared by:
Crawford Multari & Clark ASSOCIATES

posed for leach fields rom prior cultivation. peas. The soil type, ort the re-colonization rity for biological and archaeological resources, the LOCSD has eliminated the Powell property from consideration as a disposal leach field site.

Impact BIO-21: **Long-term operation of leach fields could result in the disturbance of Coastal Scrub habitats from increased groundwater elevations. However, ground water modeling conducted by Metcalf and Eddy (1996) indicate that operation of the disposal system would not significantly affect ground water levels within the root zone below the site. However, plants growing directly above the leach lines may encounter higher soil moisture content. Therefore, this impact is considered significant but mitigable (Class II). Refer to the February 2001 Final EIR page 282.**

Mitigation: Mitigation BIO-9 Avoid or Minimize Disturbance of Special-Status Plants Located Within and Adjacent to the Perimeter of the Project Site Construction Zone. Implement the following measures prior to and during construction to avoid or minimize unnecessary disturbance of special-status plants occupying the vicinity of the project site.

- Retain a qualified botanist to conduct focused surveys for special-status plant species during the appropriate flowering periods for the various species that are known to occur or have potential to occur within the construction zone of the project site, based on the presence of suitable habitat.
- Clearly map and identify each individual or groups of special-status plants observed during the focused survey with highly visible flagging. Morro Manzanita located in the southern


Image © 2009 DigitalGlobe
© 2009 Tele Atlas
Google
35°18'44.38" N 120°46'46.29" W
elev 27 m
Jul 2, 2004
Eye alt 1.24 km

Hollister Peak

Hollister Peak Viewed From Highway 1

Hollister Peak was inhabited by the Chumash Indians when Father Junipero Serra established the Mission San Luis Obispo de Tolsa in 1772. After the Mexican revolt in 1822, the mission lands were secularized and divided among preferred Mexican citizens.

The rancho encompassing Hollister Peak was called Rancho San Luisito and was granted to Judge Jose Guadalupe Cantua in 1841. Guadalupe Cantua added on to the San Luisito Adobe in 1841 and portions of the adobe still stand on the Cuesta College campus. It is now known as the Hollister Adobe as the Joseph Hollister family moved to this ranch and into the adobe in 1866.

At that time the spectacular mountain was known as Cerro Alto or High Mountain. It has also been known as the Morro Twin. In 1884 the U.S. Coast and Geological Survey named it Hollister Peak for the family who lived at the base of the mountain. Three generations of the Hollister family were raised in the old expanded ranch house until financial difficulties in 1907 required the sale of portions of the ranch. The Hollister family continued to own property at the base of the peak until the 1950's or 60's.

The Canet family were also long time property owners and residents on the land around Hollister Peak. The Canet family cemetery is still situated on the property. The 50 graves represent many generations of the Canet family.

Before the turn of the century a Swiss immigrant, Battista Tomasini bought land on the northern half of Hollister Peak. It was later farmed by his grandson Warren. When Warren Tomasini was killed in the 1965 wreck of the ocean liner Yarmouth Castle, his brother Homer A. Tomasini took over the operation. He remains the owner today.

In the 1970's P.G.E. built some huge transmission line towers along the south eastern foothills which adjoin Hollister. Recently a new owner, J.

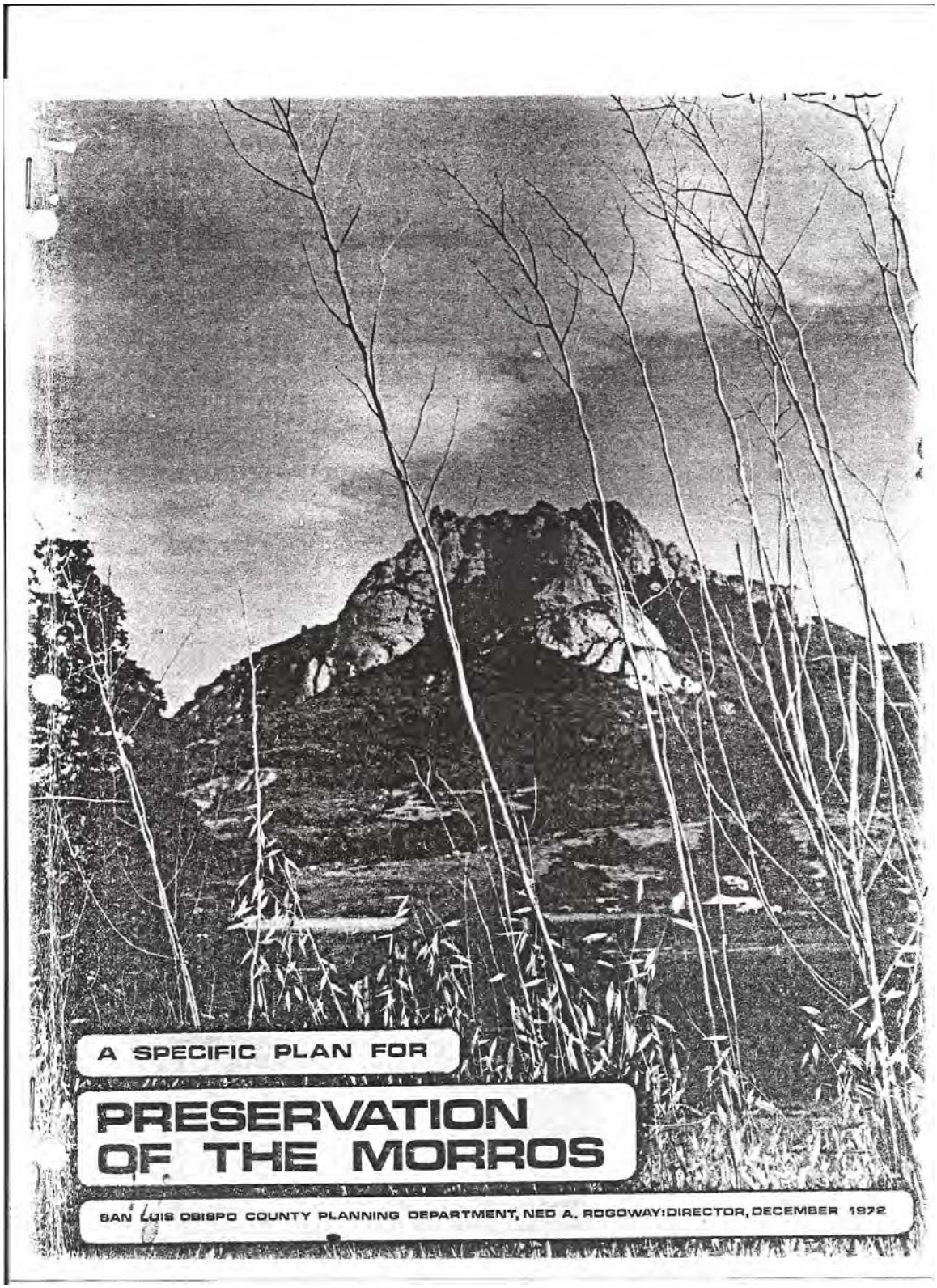
Hammons of Missouri, submitted a development plan for the property along Highway 1 and in the lower foothills of Hollister Peak. The plan calls for a golf course, motels, restaurants, and convention center. There was much opposition expressed by the local citizens and the plan was rejected by the Board of Supervisors.

In the late 1990s 576 acres of Hollister Peak was purchased by the Buckingham Family, which includes the portion of Hollister Peak's back side adjoining Morro Bay State Park.

Hollister Peak is not open to the public to climbing, or hiking of any kind. There has been several discussions as to what uses the peak could serve. It has been thought by many that this peak should remain undisturbed as an ecological reserve, and just to admire as it is.

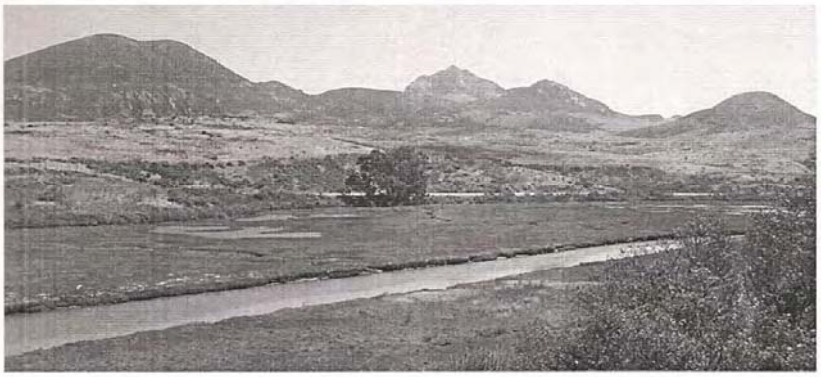
Hollister Peak remains a majestic masterpiece created by mother nature. It often looks like a dinosaur as it towers 1,404 feet above the ocean. As quoted by the H.W. Fairbanks, Description of the San Luis Quadrangle, 1904.

"The rock is so steep that in can be scaled at only one point. Hollister Peak rises from a base but a little above tide water to a height of over 1,400 feet, and projects on its northern face almost vertical cliffs."	**H.W. Fairbanks, 1904**


A SPECIFIC PLAN FOR
PRESERVATION
OF THE MORROS
SAN LUIS OBISPO COUNTY PLANNING DEPARTMENT, NED A. ROGOWAY: DIRECTOR, DECEMBER 1972

MORROS AREA · CONSTRAINTS ANALYSIS

SAN LUIS OBISPO COUNTY

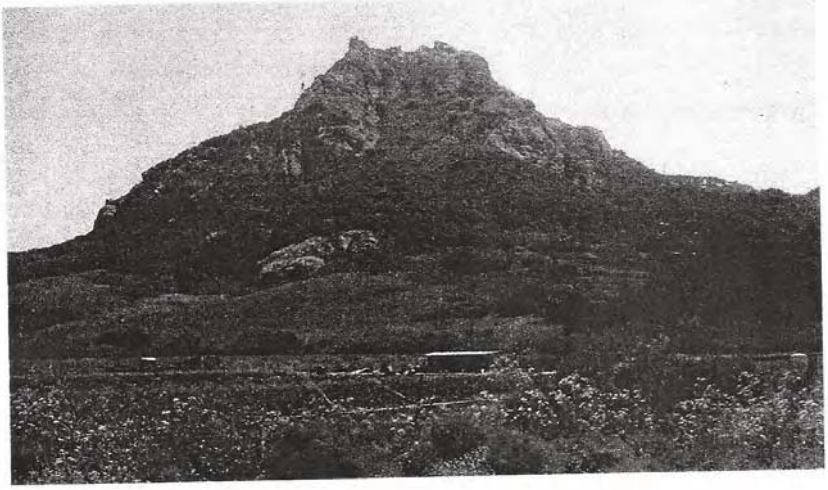


NOVEMBER 2001

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING

THE MORROS AREA SPECIFIC PLAN

SAN LUIS OBISPO COUNTY



INTERNAL DRAFT FOR THE MORROS ADVISORY COMMITTEE

FEBRUARY 2004

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING

Location No	Road Name	Nearest Cross Stree	Date	A D T	AM Peak	AM Peak Volume	PM Peak	PM Peak Volume	Peak Day	Volume
4150	Los Berros Rd	W of Highway 101 SB ramps	05-Oct-04	7606	700	759	1600	677	Wed	7606
4990	Los Berros Rd	E of Stanton Rd	06-Oct-05	5708	715	517	1530	503	Thurs	5708
4990	Los Berros Rd	S of El Campo Rd	06-Jun-06	6350	700	583	1700	632	Tue	6350
4990	Los Berros Rd	S of El Campo Rd	02-Nov-05	6483	700	584	1700	595	Wed	6483
4990	Los Berros Rd	S of El Campo Rd	07-Sep-08	5753	700	455	1600	547	Fri	6488
4990	Los Berros Rd	S of El Campo Rd	30-Jul-06	6125	1130	466	1630	609	Fri	6551
8530	Los Berros Rd	25' S of Milton St	05-Sep-05	5782	700	627	1700	622	Fri	6879
8530	Los Berros Rd	25' S of Milton St	01-Nov-06	7846	900	816	1600	615	Thurs	7890
3360	Los Olivos Ave	W of Tenth St	19-Aug-08	1087	1100	105	1400	107	Wed	1138
7350	Los Olivos Ave	W of South Bay Blvd	15-Aug-06	2625	730	227	1615	254	Tues	2668
3040	Los Osos Valley Rd	E of Foothill Blvd	11-Sep-07	21279	800	1577	1700	1795	Thurs	21372
3050	Los Osos Valley Rd	W of Foothill Blvd	30-Jul-06	14781	715	1193	1645	1483	Fri	16084
3050	Los Osos Valley Rd	W of Foothill Blvd	09-Nov-06	17119	800	1277	1700	1717	Wed	17119
3050	Los Osos Valley Rd	W of Foothill Blvd	08-Jun-06	17888	800	1465	1700	1596	Thur	17888
3050	Los Osos Valley Rd	West of Foothill Blvd.	07-Sep-08	13834	800	1160	1700	1435	Fri	15547
3160	Los Osos Valley Rd	E of Pecho Rd	25-Jul-06	7737	1145	710	1700	724	Tues	7902
3170	Los Osos Valley Rd	W of Bush Dr	11-Sep-07	12099	800	944	1700	1147	Thurs	12498
3180	Los Osos Valley Rd	E of Ninth St	19-Aug-08	16105	1100	1196	1700	1406	Tues	16307
6340	Los Osos Valley Rd	W of Clark Valley Rd	25-Jul-06	16648	730	1211	1700	1635	Tues	16649
6340	Los Osos Valley Rd	@ Los Osos Creek	15-Aug-06	18363	1130	1266	1645	1809	Wed	18824
6340	Los Osos Valley Rd	E of South Bay Blvd	25-Jul-06	17108	745	1269	1700	1642	Thurs	17143
6910	Los Osos Valley Rd	W of South Bay Blvd	11-Sep-07	16272	700	1401	1700	1370	Tues	16561
8510	Los Osos Valley Rd	1.2 miles W of Foothill Blvd	23-May-04	14085	700	1277	1700	1504	Fri	16516
8510	Los Osos Valley Rd	1.2 miles W of Foothill Blvd	02-Aug-05	14965	800	1106	1700	1481	Fri	16344
8510	Los Osos Valley Rd	1.2 miles W of Foothill Blvd	29-Nov-06	14646	100	1254	1900	1301	Thurs	14861
8510	Los Osos Valley Rd	1.2 miles W of Foothill Blvd	20-Aug-07	14563	1000	1106	2000	1328	Fri	15198
9490	Los Osos Valley Rd	W of Palisades Ave	22-Aug-06	9690	1130	718	1645	883	Tues	9761

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Julie Tacker, January 30, 2009 (Letter P24)

Response to Comment P24-1

This comment expresses a desire for clarification regarding the implementation of the fixture-retrofitting program. Retrofitting to low flow bathroom fixtures will be a condition of hooking up to the wastewater collection system. No additional ordinances or enforcement staff is required; inspection or proof of retrofit would be included as part of the process used to inspect the on-site connections between the house and the community system. Funding for retrofits as identified in the project description is intended to assist low income and/or needy residents with the costs of this requirement.

Response to Comment P24-2

This comment expresses a concern regarding revegetation at the Broderson leachfield. The mitigation measure (5.5-A16) requiring restoration of vegetation on the Broderson is not for the leachfield area. The objective of the restoration effort is for the remaining 72 acres of the property to enhance habitat for sensitive plant and wildlife species impacted by the construction and operation of the LOWWP. We agree that restoring the leachfield area with habitat of sensitive species would be counterproductive and result in the recurring impacts that are alluded to, however, the use of native plants for erosion control on the leachfield area is desirable to both control potential erosion and prevent invasion of the area by non-native plants and/or noxious weeds.

The CNPS was referenced as an entity that could provide input on restoration methods and not as an agency that would have approval authority.

Response to Comment P24-3

The comment is concerned with a change in disposal method at the Broderson leachfields that would cause future problems. We agree that restoring the leachfield area with habitat of sensitive species would be counterproductive and result in the recurring impacts. The area will require some type of vegetation to prevent the spread of undesirable and invasive plants to the remainder of the Broderson site used for habitat mitigation. The use of native plants will provide the best possibility for erosion control and reduce the potential for the spread of invasives.

Response to Comment P24-4

The comment is concerned with why the California Native Plant Society is listed as an agency to oversee the revegetation. The CNPS was referenced as an entity that could provide input on restoration methods and not as an agency that would have approval authority.

Response to Comment P24-5

This comment expresses a desire to incorporate the results of the upper basin safe yield and creek compartment analysis in to the Draft EIR once the studies have been received. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P24-6

This comment expresses a concern that the District does not have land use authority and could restrain water resources to hamstring future development. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P24-7

This comment expresses a concern that improvements to the basin may be difficult for Golden State Water Company to fund due to failed rate increases. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P24-8

This comment states that the maritime chaparral was omitted from the list of identified plant communities. Central maritime chaparral was mentioned on page 5.5-12 of the Draft EIR. A map portraying the distribution of central maritime chaparral is found in Exhibit 5 of Appendix G-2 – Biological Resources Assessment. Based on current design of the leachfields at Broderson, none of the Central Maritime Chaparral community would be impacted by construction or operation.

Response to Comment P24-9

This comment is concerned with the actual acreage that is likely to be disturbed at the Broderson leachfield site. The area of disturbance for the leachfield would approach 8 acres; the access road to the site would require additional acreage but is located in an area already substantially disturbed by the existing path/road.

Response to Comment P24-10

This comment states that an additional Section 7 permit would be necessary due to the potential loss of habitat for the Red-legged frog. Mitigation Measure 5.5-A1 requires consultation with the US Fish and Wildlife Service to deal with sensitive species issues. Red-legged frog is a species that would be included in the consultation. Mitigation Measure 5.5-A8 specifically calls for consultation on the red-legged frog.

Response to Comment P24-11

The comment expresses concern regarding the quality of wastewater that would be released in a STEP/STEG spill. The wastewater resulting from a spill would be considered untreated and hazardous. Even if there were a small level of treatment, this water would still be considered hazardous until treated.

Response to Comment P24-12

The comment is concerned about the community wetland map not containing all of the wetlands known in town. The objective of the wetlands map in the LOWWP Draft EIR was to provide a general baseline for the larger wetlands in town and along areas that would be impacted by the project. The wetland area at the "Tri-W site" (Mid-town site) identified in the comment is outside of the boundaries of the Mid-town pump station.

Response to Comment P24-13

This comment recommends conducting additional surveys to identify wetlands that may have been overlooked. Wetlands are generally an issue with associated impacts. Since the collection system will be placed within the existing roads, impacts to wetlands should not occur.

Response to Comment P24-14

This comment expresses a concern regarding the need for dewatering at wetlands. Dewatering during construction may be required. Pumping of groundwater into tanks for proper disposal or other approved disposal methods as required by the Regional Water Quality Control Board will occur. The impacts of dewatering would be temporary and would require best management practices for both trench shoring and proper disposal of water. Appropriate permits for discharge of the groundwater would be obtained as discussed in Response to Comment A4-2.

Response to Comment P24-15

This comment expresses a concern regarding characterization of the large drainage ways that cross the Tonini site. Drainages on the Tonini property were accurately mapped and include both waters of the US and the state, as well as coastal streams. Exhibit 5.5-2 of Appendix G-1 shows the location of jurisdictional drainages throughout the project area, including the Tonini site. Exhibit 5.5-3 displays Coastal Stream ESHAs. Detailed site plans of the Tonini property with both the treatment plant and sprayfields show that all of the drainages will have a 100 foot buffer to protect the resources. Concerns of overspray will be controlled by an operating manual which will identify conditions when spraying can occur.

Response to Comment P24-16

This comment is concerned with an incorrect table reference. The reference is on page 5 .11-3 of the Draft EIR is revised as follows:

> All other thresholds had a potentially significant impact prior to mitigation for at least one of the proposed projects. See Table 5.~~12~~11-1 below.

Response to Comment P24-17

This comment states that while land use principals and policies should drive development, the public on the whole sees resource availability as a nexus to growth. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P24-18

This comment expresses a concern that three of the proposed projects (Proposed Project 1, 2 and 3) are similar due to the site locations. It is acknowledged that the three proposed projects that include the Cemetery, Giacomazzi and Branin sites differ slightly. However, the components proposed at each of the proposed projects differ, resulting in different environmental impacts.

Response to Comment P24-19

This comment expresses concern that the TAC did not have an opportunity to conduct a Pro/Con analysis for the Tonini site. During the preparation of the environmental analysis it became evident that locating a treatment plant on the Tonini site was a viable alternative; the EIR provides a full analysis of that alternative and the public has had an ample opportunity to review and comment on the alternative. Throughout the TAC meetings and Pro-Con analysis it was continually acknowledged that the EIR process would evaluate a wider set of project alternatives than the Fine Screening Report, upon which the Pro-Con report was based.

Response to Comment P24-20

This comment is concerned with the reasons that the Gorby site was not selected as a potential wastewater treatment facility site. The numerous reasons that the Gorby site was designated a Level C alternative and not selected are summarized in Table 7-6 in the Draft EIR and Section 3.2 of the Draft EIR Appendix P-2. Key concerns include the fact that the treatment and wet weather storage ponds would not fit on the Gorby site and would necessarily require additional productive farmland to be converted for the facility. While both the Gorby and Tonini sites are designated Agriculture, the creek valley, where Gorby is located, has the more productive soils. A second concern is the close proximity of the site to residentially zoned and developed land (adjacent on the west side and upgradient from a residential neighborhood to the south). However, perhaps the greatest concern with the Gorby site is that it lies astride the Los Osos fault zone, as shown in exhibit 5.4-1. Development of a wastewater treatment plant in such close proximity to mapped faults is not prudent.

Response to Comment P24-21

This comment states that the current Creek Compartment analysis being conducted by the purveyors may prove positive for Gorby site in that its proximity to the creek and the Paso Formation surfaces there may prove beneficial for disposal of treated wastewater in either direct discharge into the creek or percolation ponds adjacent to the creek. It should be noted that the placement of percolation ponds on the productive soils in the creek valley would consume a large amount of the best agricultural soils in the area. Direct discharge into any surface water body requires a higher and more costly level of treatment, and is strongly discouraged by the RWQCB. However, if percolation ponds or creek discharge were pursued by the water purveyors, both could be accomplished by the proposed project due to the location of the treated effluent line at Los Osos Valley Road; it is not necessary to locate the treatment plant adjacent to all of the effluent reuse possibilities. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P24-22

The comment is in relation to an alternative that is not being pursued and was rejected early in the process (see Response to Comment P24-20). Construction phasing between the collection system and the treatment plant will be implemented to ensure that the project becomes operational at the soonest possible time.

Response to Comment P24-23

This comment recommends providing farms with treated wastewater. See Topical Response 4, Tertiary Treatment, regarding agricultural reuse.

Response to Comment P24-24

This comment expresses a concern with the inclusion of Bruce Buel, George Milanes, George Gibson and Ellen Rognas as individuals consulted from public agencies. It should be clarified that these individuals were responsible for the production of numerous studies and documents that were used in the development of the EIR and other technical reports used in the project development process and were not necessarily contacted directly.

Response to Comment P24-25

This comment refers to duplicate reference entry. The reference is on page 11-2 of the Draft EIR and is revised as follows:

> ~~Crawford, Multari, and Clark Assocaites. 2001. Final Environmental Impact Report for the Los Osos Community Services District Wastewater Facilities Project, March 1.~~
>
> Crawford, Multari, and Clark Associates. 2001. Final Environmental Impact Report for the Los Osos Community Services District Wastewater Facilities Project, March 1.

Response to Comment P24-26

The comment states, the California Coastal Commission has adopted new area standards for the Estero Area rural planning area on January 9, 2009, and that the new Area standards identify Turri Road as Sensitive Resource Areas. The new area standards are found on page 6-13 of the Estero Plan Update indicates that the hills and connecting ridges that are visible from Turri Road are part of a sensitive resource area (SRA). However, this portion of the plan does not explicitly designate Turri Road as a scenic corridor. Moreover, the area of the hillsides considered visually sensitive is 300 feet below the ridgelines or peaks. Neither the proposed treatment facility nor sprayfields are located within this 300 foot visually sensitive area. Exhibit 5.12-1 in the expanded visual resources section shows the delineation of the SRA's with respect to Turri Road and the Tonini parcel.

Response to Comment P24-27

This comment expresses desire for the Morros Specific Plan to be adopted by the Board of Supervisors and in light of the Ag and Open Space Element has not been adopted by the Coastal Commission as the draft plan encourages conservation easements "in perpetuity." Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P24-28

Two points are made in this comment concerning visual resources. A comment is made that development of the Tonini site would have a visual impact. A second point made in the same comment is that a full visual simulation be prepared including a night-time simulation.

Regarding the first point, six visual simulations have been prepared that depict views of the Tonini site as seen from Los Osos Valley and Turri Roads (see Appendix Q5.12). The treatment facility features have the appearance of other agricultural type buildings in the surrounding area as required by Mitigation Measure 5.12-F-1 (page 5.12-45 expanded Visual Resources section) and are colored brown. With the implementation of this mitigation measure impacts to AG zoned parcels would be less than significant, as discussed on page 5.12-46 of the expanded Visual Resources section.

Regarding the second point, as specified in Mitigation Measure 5.12-D-1 (page 5.12-38, expanded Visual Resource section) a lighting plan would be required for the treatment facility at the Tonini site, and shielding would be required to reduce light and glare impacts on neighboring properties. Regarding night time views, it is intended that during night time hours when the plant is not manned, no lights would be on. Security lighting, if necessary, would use motion detectors or other methods to ensure that no unnecessary lights are used. Lights will be provided if work needs to occur at night (which would not be the norm); those lights will be fully shielded to reduce their impact if and when they are needed. After implementation of this mitigation measure, impacts would be less than significant (page 5.12-39, expanded Visual Resources section).

Response to Comment P24-29

This comment states that the visual impacts of building a pump station on the "Tri W site" (Mid-town) are understated in the Draft EIR. More specifically, the comment states that building a pump station near Los Osos Valley Road would block a public view that is recognized by the California Coastal Commission. The current view from LOVR looking north shows a vacant lot, with a fence in the foreground. The Mid-town pump station is a small facility set back from Los Osos Valley Road with landscaping and muted building colors. While visible, the small size of the facility, especially is relation to the previous project, will not result in a significant blockage of views.

Regarding the point about the need for nighttime visual simulation for the Tonini site, light and glare impacts with reference to the treatment plant at Tonini are found in the expanded section 5.12. The nature of the light and glare impact in a rural setting is described on page 5.12-36, while the specific impact to the Tonini site is described on page 5.12-38. Given that the impact is clearly identified visual simulations are not needed. (See also Response to Comment P24-28).

Response to Comment P24-30

This comment expresses a concern regarding the historical significance of the "Great Grizzly Hunt." The fact that the valley was used for hunting in the 1770s is irrelevant. The impacts associated with the construction and operation of the LOWWP would have no affect on this activity and would not degrade the historical importance of the Los Osos Valley.

Response to Comment P24-31

The comment is concerned about approval signatures for the cultural resources Memorandum of Understanding and the some of the difficulties on the last project. The County has held several meetings with Native Americans concerning a Native American Participation Plan and a Reburial

MOA. The discussions are on-going, but there does not appear to be any concern with obtaining appropriate signatures from the most likely descendants. The County's approach to addressing Native American concerns is far more inclusive of cultural issues than the agreement negotiated for the previous project.

Response to Comment P24-32

This comment expresses the concern that the Draft EIR failed to consider effect of decommissioning septic tanks in the air quality analysis. The Draft EIR did evaluate the truck and fugitive dust air quality impacts from the "filling in" of the old septic tanks for the gravity project alternatives and evaluated the entire removal and installation of septic tanks if the STEP project were selected.

Response to Comment P24-33

This comment is concerned with the pace of decommissioning existing septic tanks and the ability of area treatment plants to handle the volume of septage. A typical part of the building of any new treatment works is the development of an initial operations plan. As part of the plan, issues dealing with septage disposal will certainly be considered and coordinated with the Santa Maria plant and others. It should be noted however that residences could hook up to the new sewer and then pump and abandon their tanks at a somewhat later date if necessary.

Response to Comment P24-34

This comment asks if other County residents would have their septic tanks underserved during the time that the haulers are providing service for the project. The septic haulers would still be required to serve other portions of the County as provided in their contracts. See also Response to Comment P24-33.

Response to Comment P24-35

This comment concerns construction staging areas that will be used for LOWWP construction. The Preferred Project description and Exhibit Q.3-3 have been updated to identify two planned construction staging areas. The first is a 1.5 acre parcel southwest of the Tonini treatment plant access road intersection with Turri Road, and the second is a portion of a 7 acre parcel on the southeast corner of Pismo Avenue and 18th Street. This second construction staging site, which is also the East Paso Pump Station site, was used during construction of the previous LOCSD wastewater project before it was discontinued.

Response to Comment P24-36

The comment expresses two points. One point is that visual impacts associated with staging of Baker tanks was not analyzed in the Draft EIR. The second point is that Baker tanks are large and would obstruct views for both traffic and those of the scenic neighborhoods.

Regarding the first point, on page 5.12-22 in the Expanded Visual Resources section, temporary construction impacts to residential areas within the community of Los Osos are disclosed, and it is concluded these activities would not impact scenic vistas. To clarify that Baker tanks are considered

a temporary, construction-related impact, the relevant section on page 5.12-22 will be changed to state the following:

> Short-term construction impacts would temporarily change the appearance of the residences where old septic tanks would be removed. Construction activities would create dust, expose soil from grading, create soil piles from trenching and excavation, and may temporarily require Baker tanks for dewatering of trenches. However, these activities would not block views of scenic vistas. Therefore, short-term construction impacts associated with Proposed Project 1 would not have a significant impact on a scenic vista.

The analysis for the other three Proposed Projects concludes that the impacts to scenic vistas for the collection system are the same as for Proposed Project 1.

Regarding the second point, regulatory guidance reviewed in preparing the Draft EIR is discussed on pages 5.12-16 through 5.12-21 of the expanded Visual Resources section, and indicates there are no designations of particular neighborhoods as scenic resources. Moreover, evaluation criteria for visual resources listed on page 5.12-21 of the expanded Visual Resources section indicate impacts are evaluated for scenic vistas, scenic resources within a state scenic highway, scenic corridors designated from the Estero Plan update, and agriculture zoned parcels.

Response to Comment P24-37

This comment expresses concern that water removed from trenches is likely polluted by septic effluent and what would be done with the polluted groundwater. This groundwater may or may not require treatment. If treatment is required, portable systems designed for this purpose could be employed. Also, the RWQCB has determined that if unpolluted groundwater is removed during construction, it can be used without treatment.

Response to Comment P24-38

This comment expresses a concern regarding the noise generated at the Tonini treatment plant for Proposed Project 4. The comment states that during construction there will be tremendous noise and once construction is complete there will be ongoing noise associated with pumps, aeration and the mowing of grass associated with the sprayfields. The proposed treatment plant facilities are located more than a quarter of a mile from Turri Road. Construction activities will increase noise levels due to construction traffic and construction activities at the Tonini site. These impacts will occur during the day in accordance with the existing County of San Luis Obispo Noise Ordinance. Given the temporary nature of these noise impacts and compliance with the County's Noise Ordinance the impacts will be less than significant; as discussed in Section 5.10 and in the Expanded Noise Analysis. The proposed project would also require mowing the sprayfields, a few times over the course of a year, as discussed in Technical Memorandum, Effluent Reuse and Disposal Alternatives, provided by Carollo Engineers. However, the mowers would not generate noise levels in excess of existing tractors and harvesting equipment.

Response to Comment P24-39

This comment expresses a concern that the recent adoption of Title 23 changes need incorporation into the Draft EIR. As described in the June 27, 2008 staff report, San Luis Obispo County proposes to amend the Coastal Zone Land Use Ordinance (CZLUO), or Implementation Plan (IP) portion of its certified Local Coastal Program (LCP). The amendment updates multiple IP sections and a review of the updated sections is as follows:

Section 23.01.043c(3)(i) - Appeals to the Coastal Commission: This revised section does not alter the conclusions within the Draft EIR.

Section 23.04.186d3 - Landscape Plan Content: This revised section establishes general application guidelines for use of fertilizers and nutrients. Mitigation Measure 5.12-C2 in the Draft EIR requires the preparation of a final landscape plan at each of the proposed treatment plant sites. Given that the landscape plans would be at the treatment plant site, surface water drainage within the treatment plant site would be collected onsite into a retention basin so that it is not conveyed offsite. Therefore, fertilizers and nutrients associated with the landscaping would not result in impacts to surface waters.

Furthermore, implementation of the proposed treatment plant facilities may require the crossing of stream changes, specifically at the Tonini site. Each of the drainage courses that could be crossed by pipelines and/or access roads would be required to go through a Section 404 permit; thus requiring enhancement of any of the affected drainage course. None of the drainage courses are proposed to be channelized.

Section 23.04.200 - Archeology: This revised section stated that the highest priority shall be given to avoiding disturbance of sensitive archaeological resources. As discussed in the Appendix Q, Preferred Project Evaluation, the existing archaeological areas associated with the Preferred Project (i.e., at the Tonini site) that are potentially significant will be avoided and a buffer has been established to reduce potential impacts to less than significant.

Section 23.04.210 - Visual Resources: See Response to Comment P24-26 regarding the new visual resource standards and their applicability to the proposed project.

Section 23.04.220 - Energy/Solar: This revised section identifies the need for consulting policies and guidelines for designing compact communities and energy efficient projects. This new section does not modify any of the conclusions within the Draft EIR.

Section 23.05.050 - Drainage: This section includes drainage standards for new development projects requiring Minor Use Permit or Development Plan approval. Since the project will require a development plan, the applicable new drainage standard states that projects shall maximize groundwater recharge. Since the proposed project includes the Tonini sprayfields and the Broderson leachfields, the project would comply with this new drainage standard. In

addition, the drainage created by the proposed treatment facilities at the Tonini site would be collected onsite into a retention basin so that it is not conveyed offsite. This would minimize impacts to adjacent sensitive habitat.

Section 23.05.062 - Tree Removal: This revised section does not alter the conclusions within the Draft EIR.

Section 23.05.110 - Roads and Bridges: This new section does not alter the conclusions within the Draft EIR.

Section 23.06.100 - Water Quality: This new section addresses chemical control for projects that have a potential to release toxic or hazardous materials. Mitigation Measure 5.7.B.1 requires the development and implementation of a Hazardous Materials Management Plan that would reduce potential hazards to less than significant.

Section 23.06.104 - Municipal Wells: This new section does not alter the conclusions within the Draft EIR.

Section 23.06.106 - Onsite Sewage: This new section does not alter the conclusions within the Draft EIR.

Section 23.06.108 - Chemical Control: See discussion of Section 23.06.100 above.

23.07.104c - Archaeology. See discussion of Section 23.04.200 above.

23.07.170 - Environmentally Sensitive Habitats: This new section does not alter the conclusions within the Draft EIR.

Section 23.07.172 - Wetlands. This revised section does not alter the conclusions within the Draft EIR.

Section 23.11.030 - Environmental Sensitive Habitats Definition: This revised section does not alter the conclusions within the Draft EIR.

As discussed above, none of the revised or new sections that are part of the recently adopted San Luis Obispo County Local Coastal Program Major Amendment No. 2-04 (Part 3) Title 23 Coastal Zone Land Use Ordinance Amendment would alter the conclusions within the Draft EIR for LOWWP.

Response to Comment P24-40

This comment expresses a concern regarding the cost allocations associated with the project and environmental justice impacts. See Topical Response 2, Project Costs.

Oceanside International Real Estate

1301 Los Osos Valley Rd.
Los Osos, CA 93402

29 January 2009

To:

Mr. Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Dept. of Public Works
County Government Center, Room 207
San Luis Obispo. California 93408

Dear Sir,

I have sold Real Estate in Los Osos for over 30 years. In doing so, I have met hundreds of people, and have sold several vacant Los Osos Lots. I have also been part of a limited Corporation named FAIR, formed by a large group of Los Osos Lot owners who have hired a Legal Firm to represent Vacant Lot Owners' Interests in Los Osos.

We are, and have always been concerned that San Luis Obispo County Representatives have been eager to collect Real Property Taxes from Los Osos Vacant Property Owners, without sufficient interest in assuring this group of tax papers that services will be available when the Los Osos sewer moratorium is lifted. After an excess of over twenty years of oppression, due to a lack of governmental control in the Los Osos sewer matter, vacant lot owners are now seeing the threat of our government's lack of providing water so that these property owners can enjoy their properties as others in the community have all these years. P25-1

I have had a grave matter brought to my attention by a member of FAIR regarding the:
Environmental Report Draft, for the Los Osos Valley Wastewater Treatment

Fluids should NOT be piped OUT of Los Osos, without a fluid return pipe, as doing so will either hurt our community's water availability, or will cause additional cost to pipe water from other sources to remedy our community's problems.

Piping fluids out, and disposing of them over fields may very well compound severe problems, instead of solving them.

I know I am speaking in behalf of several FAIR members, besides myself, as we are all watching, and hoping that our governmental representatives are taking every step they can not only to solve problems, but also to prevent additional expenses to be placed in the future as an additional burden to existing members of this community, as well as to those property owners that have already been unfairly burdened during these past 20 years.

P25-1
CONT

Please consider the installation of effluent return pipes, to save our community from future concerns, as it appears to be one of the least expensive methods to alleviate sea water intrusion.

Sincerely,

Sandy Bean

Oceanside International R.E.
Owner/Broker

e-mail: Sandy@SandyBean.net fx: (805) 888-2788 Web: http://www.SandyBean.net

Oceanside International Real Estate, Sandy Bean, January 29, 2009 (Letter P25)

Response to Comment P25-1

This comment expresses a concern regarding the availability of services after the moratorium is lifted. The proposed project includes the development of infrastructure for a wastewater collection, treatment, and disposal system. Because the comment is outside the scope of the Draft EIR, no further response is required. See Topical Response 3, Water Resources and Project Scope.

THE ZUMBRUN LAW FIRM
A Professional Corporation

January 29, 2009

VIA OVERNIGHT DELIVERY

Mr. Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Department of Public Works
County Government Center
1055 Monterey Street, Room 207
San Luis Obispo, CA 93408

Dear Mr. Hutchinson:

Re: Los Osos Wastewater Project Draft Environmental Impact Report

We represent the Bear Valley Land Stewardship Alliance (BVLSA) in Los Osos Valley in regard to the Los Osos Wastewater Project (LOWP) Draft Environmental Impact Report (DEIR). The purpose of this letter is to comment on the DEIR on behalf of BVLSA.

We acknowledge and commend the selection of the Tonini property as the environmentally superior location for the LOWP (identified as Project 4 in the DEIR). This decision is logical in that it consolidates all of the wastewater facilities in Los Osos Valley onto one property. The other project options would have spread the LOWP facilities across Los Osos Valley.

Consolidating the LOWP onto one property follows the same logic of cluster housing on open land, mainly to avoid spreading impacts. Environmental impacts from traffic, roadways, night lighting, noise, and odors in Los Osos Valley would be confined to the best extent practical if the Tonini property is used for the LOWP. The location also makes sense from a maintenance and operations standpoint.

We would also like to comment on issues that may arise in transitioning from the DEIR to the final EIR. In this regard, we understand the County's guidance in several recent public meetings that comments on the DEIR should not be on the particular locations selected for disposal, those being the Broderson and Tonini sites. The disposal locations are fixed. Comments may be

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directed at the treatment facility and storage ponds, including their locations, but relative to environmental impact assessments that may have not been addressed completely or were overlooked. This is not to exclude comments supporting impact descriptions and decisions.

Although we acknowledge the Tonini property as the environmentally superior location for the LOWP, we also recognize that the ultimate locations for the treatment facility and storage ponds could change. How and in what manner these may change (or not change) will, of course, depend on the nature of public comments to the DEIR, results from a "community survey," how your office interprets the comments and survey, and the final decision by the San Luis Obispo County Board of Supervisors.

With that said, we recognize that Project Options 1, 2, and 3 consist of using various combinations of the cemetery, Giacomazzi and Branin properties for the treatment facility and storage ponds. Other sites considered nearby include the Andre and Robbins properties. All five properties, however, should be excluded from consideration should any reevaluation occur concerning the location of the LOWP. In addition to being proximate to existing neighborhoods, these properties drain towards Warden Creek and Lake, which are on the properties. Warden Creek and Lake and the Morro Bay National Estuary would be at close risk to accidental sewage spills. Some of these properties are also classified as being within flood zone hazards identified by the County. Flooding is not compatible with sewage treatment, storage, and spray field disposal. We hope that the unique physical characteristics of these properties were included as important reasons for rejecting Project Options 1, 2, and 3 and selecting Project 4 as the environmentally superior location for the LOWP. P26-1

The DEIR did not appear to strongly highlight the near certainty of odor impacts to neighborhoods in Los Osos Creek Valley if Project Options 1, 2, or 3 is implemented, in comparison to Project 4. There was no apparent distinction made, or the distinction was subtle.

Odor impacts were conveyed in a letter dated September 4, 2007 to the County Board of Supervisors and Public Works Department. The letter includes a signed petition from largely all of the property owners living in close proximity to the cemetery, Giacomazzi, and Branin properties. The petition list includes signatures from 60 property owners and six nonproperty owner residents (of voting age). The letter and the petition oppose any sewer project in these areas. The letter specifically states that odor impacts would occur, and includes a detailed description of how they would occur. The mechanism stems from the low-lying nature of Los Osos Creek Valley functioning as a "sink" of cooler denser air. A slight offshore wind also develops nearly every night. The combination would result in sewage odors being conveyed and retained in Los Osos Creek Valley on a frequent basis if Project Options 1, 2, or 3 is implemented. P26-2

In contrast, sewer odors would have a lower probability of affecting neighborhoods in Los Osos Creek Valley if Project 4 is implemented, depending on the design and operation of the LOWP and because it is more distant from neighborhoods. This may have been considered in selecting

Project 4 as the environmentally superior location for the LOWP over the other project options. If this was the case, it was not clearly apparent in the DEIR. P26-2 CONT

It should be noted that implementing Project Options 1, 2, or 3 would not eliminate the need to still purchase the Tonini property for spray field disposal. Implementing any of these project options would require the purchase of two or more properties (Tonini plus unidentified "others"). Acquisition of "other" properties in Los Osos Valley may not be possible and, at minimum, would significantly delay completion of the LOWP.

If any reevaluation is to occur regarding the location of the LOWP, our position is that the Mid-town site should be the only site reconsidered, with perhaps the original Tri-W treatment facility. In other words, the treatment facility could be built on the Mid-town property with effluent storage and disposal still occurring on the Broderson and Tonini properties.

P26-3

Should a reconsideration of location occur, we strongly believe that the Mid-town site should be considered as the preferred site for the Los Osos sewer, or ranked similarly to the Tonini site. A primary reason is that the Mid-town site was the preferred site for the LOWP based on a prior EIR. Also, the Mid-town property remains undeveloped and is still owned by the Los Osos Community Services District.

Therefore, should the location for the LOWP be reevaluated, only the Mid-town site should be considered and preferably selected as the final site for the treatment facility. Otherwise, the Tonini site represents the next reasonable option used in combination with the Broderson leach field.

Finally, we assume if Project 4 goes through that various pump stations will need to be installed in Los Osos Valley and Los Osos Creek Valley. If this occurs, we would like to see each pump station associated with overflow sewage capture and retention equipment (e.g., overflow tanks). This would minimize the potential of accidental sewage spills reaching Los Osos Creek, Warden Lake, and Warden Creek in the event of pump station failures. P26-4

Thank you for the opportunity to comment on the DEIR.

Respectfully submitted,

Ronald A. Zumbrun

RONALD A. ZUMBRUN
Managing Attorney

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The Zumbrun Law Firm, Ronald A. Zumbrun, January 30, 2009 (Letter P26)

Response to Comment P26-1

This comment states that the Cemetery, Giacomazzi, and Branin properties should be excluded from consideration of further evaluation due to the proximity of the sites to existing neighborhoods, Warden Creek and Lake, and the Morro Bay National Estuary. These three properties are included in one or more of the proposed projects. None of the proposed projects have been rejected; however, as identified in Appendix Q the Preferred Project is to use the Tonini site for the proposed treatment facilities as well as sprayfield disposal.

Response to Comment P26-2

This comment expresses a concern that the Draft EIR did not emphasize odor impacts to neighborhoods from the implementation of Proposed Projects 1, 2 or 3. Section 5.9, Expanded Air Quality Analysis, in Appendix K-1 discusses odor impacts on page 5.9-54 through 5.9-61. This section addresses potential odor impacts associated with the components of the proposed projects as well as the project features that are included as part of the project to reduce potential impacts to less than significant. These project features are critical in reducing potential odor at the treatment plant site.

Response to Comment P26-3

This comment expresses the opinion that should the location for the LOWWP be reevaluated, only the Mid-town site should be considered and preferably selected as the final site for the treatment facility. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P26-4

This comment expresses concerns about pump stations and potential spills. All pump stations are designed with the capacity to contain flows in the event that the pumps are not running, typically within the "wet well" that contains the pumps themselves. As described in Section 3 of the EIR, the only pump stations required in the Los Osos Valley or the Los Osos Creek Valley are the pump stations necessary to move treated effluent back to Broderson and to the sprayfields. These stations would be located at the treatment plant and/or wet weather storage sites.

RECEIVED

JAN 30 2009

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PUBLIC WORKS

LFR an ARCADIS company

January 29, 2009

LFR 021-10255-00

Mr. Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Dept. of Public Works
County Government Center, Room 207
San Luis Obispo, California 93408

Subject: Comments - Maximizing Beneficial Reuse of Treated Effluent
Draft Environmental Impact Report, County of San Luis Obispo,
Los Osos Valley Wastewater Project (LOWWP),
State Clearinghouse No. 2007121034, dated November 14, 2008.

EXECUTIVE SUMMARY

From the water resources perspective, the treated effluent from the LOWWP should ideally be kept within the Los Osos groundwater basin. Beneficial reuse of all treated effluent within the basin would help to increase local water supplies and reduce seawater intrusion, which are vital local concerns. The LOWWP, in the form recommended by the Draft Environmental Impact Report (DEIR), would keep only a portion of the treated effluent within the basin for beneficial reuse.

The DEIR recognizes that further beneficial reuse within the basin is desirable, in accordance with the secondary project goal of improving local water resources. The DEIR specifically indicates (p. 7-6) that the LOWWP "will maintain the widest possible options for beneficial reuse of treated effluent." To maximize these options, LFR offers the following recommendations:

1. The current DEIR recognizes agricultural reuse and urban reuse as potentially viable "Level B" alternatives for future local implementation. Another alternative, groundwater injection, was dismissed in the DEIR as an impractical "Level C" alternative, based on a 2001 study conducted for the Los Osos Community Services District (LOCSD). However, a more recent 2006 study for the LOCSD indicated that groundwater injection, as a form of indirect potable reuse, should be retained as an option for future local implementation. The Orange County Groundwater Replenishment System, which began operation in January 2008, has demonstrated that treated effluent can be successfully used to mitigate seawater intrusion and recharge local water supplies. For these reasons, and to maximize the available options, **the beneficial reuse of treated effluent by direct injection into groundwater should be reclassified as a potentially viable "Level B" alternative for possible future implementation.** P27-1

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2. The LOWWP currently includes the installation of an extensive network of sewers and mains (influent pipelines). **The LOWWP should also include the simultaneous installation of a strategically placed network of effluent pipelines in the same excavations, as this could likely be accomplished with relatively little additional cost or effort.** An in-place network of pipelines for treated effluent would significantly reduce the costs for implementing any future beneficial reuse strategies, regardless of the exact alternative that might be selected. P27-2

3. Even if the LOWWP is not modified at this time to include installation of effluent pipelines, **this option should nonetheless be fully addressed in the environmental review and project approval processes.** It is possible that additional beneficial reuse strategies may become feasible or necessary at some future date, prior to sewer installation. If the option of adding effluent pipelines was considered during the initial review and approval processes, then the LOWWP could be readily modified to include effluent pipelines at that future time. The review and approval processes will already address the installation of influent pipelines, and so the optional installation of effluent pipelines in the same excavations could be evaluated as well, for little additional cost or effort. P27-3

Dear Mr. Hutchinson:

LFR Inc. (LFR) has reviewed the Draft Environmental Impact Report (DEIR) for the County of San Luis Obispo's Los Osos Valley Wastewater Project (LOWWP). The DEIR was prepared by Michael Brandman Associates, and is dated November 14, 2008.

LFR specifically considered the implications of the DEIR for water resources issues, particularly the beneficial reuse of treated effluent. Water resources issues are considered as part of the LOWWP, but only as "secondary objectives" (p. 7-6).

Primary and Secondary Goals of LOWWP

The "primary goals" of the LOWWP (p. 7-58) are to "construct and operate a community wastewater system" in compliance with regulatory requirements. A "second primary goal" is to "alleviate groundwater contamination, primary nitrates" associated with the historic use of septic systems in the Los Osos area. Clearly these are pressing issues, and the LOWWP appears capable of successfully addressing them. P27-4

However, the LOWWP, in its current form, will be less successful at addressing a "secondary project objective," which is "the opportunity to benefit the community's water resources" (p. 7-59). These problems, as acknowledged in the DEIR, are also important and pressing. In 2007, the San Luis Obispo County Board of Supervisors certified a "Level of Severity III" determination for the community of Los Osos; this is the highest severity level for a resource problem in the County General Plan's Resource Management System (p. 7-6). All domestic water for Los Osos is obtained from the underlying groundwater aquifers, and these are deteriorating due to overpumping and seawater intrusion (p. 7-59).

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LOWWP Limitations for Water Resources Management

From the water resources perspective, the treated effluent from the LOWWP should ideally be kept within the Los Osos groundwater basin. In theory, treated effluent could be used either (1) as a replacement for other supplied water, for such uses as agricultural or landscape irrigation, thereby reducing the demand for groundwater, or (2) to recharge the local aquifers, thereby increasing the supply of groundwater. Both of these approaches would tend to increase local water supplies and reduce seawater intrusion.

The DEIR (table 7-7) recognized these advantages, and considered different "Seawater Intrusion Mitigation Levels" that might be achieved by the LOWWP. These options ranged from "Level 0 - No mitigation of seawater intrusion" to "Level 4 -Achievement of a balanced basin at buildout."

The recommended alternative, which falls between these two endpoints, is "Level 2 – Maximum mitigation of seawater intrusion without purveyor participation in project development." The DEIR recommends that a portion of the treated effluent (up to 448 acre-feet per year, or AFY) be discharged to the Broderson leachfield, where it will help to recharge the local aquifers. However, most of the treated effluent (up to 842 AFY) will be transported to local sprayfields outside the Los Osos basin, where it will provide no benefit as far as Los Osos water resources are concerned. P27-4 CONT

The recommended alternative is therefore not optimal from the water resources perspective: the DEIR implicitly acknowledges that there will continue to be an imbalance between groundwater pumping and recharge under the "Level 2" alternative. Other approaches would be necessary to reach "Level 3 – Achievement of a balanced basin at present water use rates" or "Level 4 – Achievement of a balanced basin at buildout."

Since a "balanced basin" will not be achieved under the "Level 2" alternative, the fundamental problems affecting Los Osos water resources will not change: water supplies will continue to be severely limited, and seawater will continue to intrude into the local aquifers. These problems will still have to be addressed by the Los Osos community in the future, regardless of the success of the LOWWP as planned.

LOWWP Rejected Alternatives

The DEIR discusses alternative approaches that would reuse treated effluent within the Los Osos basin, including agricultural reuse and urban reuse. For these alternatives, treated effluent would be used to irrigate local crops or landscaping. These approaches would increase available water supplies, reduce groundwater pumping, and thereby mitigate seawater intrusion, as acknowledged by the DEIR (p. 7-64).

P27-5

The DEIR also identified drawbacks to these approaches, including the cost for additional (tertiary) treatment of effluent, the cost to construct effluent distribution pipelines, and the need to cooperate with local water purveyors. However, the DEIR (pp. 7-64, 7-65) acknowledged that both agricultural reuse and urban reuse "could be pursued in the future by local water purveyors, especially if they are willing to participate in a treatment plant upgrade to tertiary treatment. Both agricultural reuse and urban reuse

were classified as "Level B alternatives," which means that "these potentially viable alternatives should be held for future consideration by the community" (p. 7-15).

Another potential beneficial reuse option would be to pump treated effluent directly into local water-supply aquifers through injection wells. This approach, while still relatively new, could potentially be very effective at both recharging the aquifer and mitigating seawater intrusion. In January 2008, the Orange County Water District and Orange County Sanitation District began successful joint operation of a large-scale "Groundwater Replenishment System." The Orange County system uses tertiary-treated effluent to recharge aquifers and prevent seawater intrusion, which are the same problems currently facing Los Osos.

The DEIR (p. 7-67) briefly considered direct injection of treated effluent into groundwater, but noted the need for "an extremely high level of tertiary treatment" and "regulatory constraints." This approach was then dismissed it as a "Level C alternative", which implies that it is "non-viable due to a 'fatal flaw'" (p. 7-15). As a supporting reference, the DEIR cited a historical Environmental Impact Report (Crawford Multari and Clark Associates 2001), prepared in 2001 for the Los Osos Community Services District (LOCSD). P27-5 CONT

However, this option was reconsidered in a more recent 2006 report on "Wastewater Collection, Treatment, Storage, and Water Recycling: Beneficial Reuse of Water and Nutrients" for the LOCSD. Ripley Pacific (2006, p. 66) concluded that the injection of treated effluent into potable-use aquifers, as a form of indirect potable reuse, "will not be precluded for a distant future implementation." Ripley Pacific acknowledged that that this approach was "controversial," and might not be suitable for Los Osos given "the highly divided opinion regarding wastewater management." However, the recent success of the Orange County Groundwater Replenishment System has demonstrated that this approach is technically feasible, and it is likely to find increasing regulatory and community acceptance in the future.

Opportunity to Install Effluent Pipeline Network

Local water resources could be significantly improved by the beneficial reuse of treated effluent within the basin. The DEIR recognizes this point, and makes provision for beneficial reuse of some treated effluent by percolation at the Broderson leachfield. However, most of the treated effluent would be "exported" to sprayfields outside the basin, where it would provide no benefit to Los Osos water resources.

Additional beneficial reuse within the basin is therefore desirable. And the DEIR (p. 7-6) recognizes this point as well, stating that: P27-6

> "the wastewater project will maintain **the widest possible options** for beneficial reuse of treated effluent." *(emphasis added)*

Such options could include agricultural reuse or urban reuse of – both of which are acknowledged by the DEIR as "potentially viable alternatives" that "should be held for future consideration." Another reuse option could be direct injection of treated effluent into water-supply aquifers. This may be a more controversial alternative at present, but it now appears to be technically feasible, and it has been

LFR an ARCADIS company

identified in another recent LOCSD study as a possible approach for future local implementation in the Los Osos basin.

These reuse options obviously vary, but they have one point in common: they would all require a network of distribution pipelines, to transport treated effluent from the treatment facility to the reuse points. The total cost for implementing any such option would have to include the costs for constructing such a network, which could be quite significant. In fact, the DEIR (p. 7-65) pointed out that "it is not cost effective to construct effluent distribution pipelines" to all potential urban reuse sites.

However, there appears to be a way to significantly reduce the cost of effluent distribution pipelines. The LOWWP includes the installation of an extensive network of sewers and mains (influent pipelines). **It should also consider the simultaneous installation of a strategically placed network of effluent pipelines in the same excavations, as this could likely be accomplished with relatively little additional cost or effort.** This network could be used to support future beneficial reuse projects throughout the Los Osos basin, regardless of the exact reuse options that might be selected in the future.

It might be objected that the installation of effluent distribution pipelines is beyond the scope of the LOWWP project authority, and that it should be the responsibility of water purveyors instead. But all parties should be able to recognize the potential value of this opportunity, and should be able to work together for the benefit of the community – just as the Orange County Water District and Orange County Sanitation District have recently worked together to develop their Groundwater Replenishment Project. The DEIR (p. 7-6) recognizes that:

P27-6
CONT

> "While the primary purpose of the Los Osos Wastewater Project is to construct a community wastewater system and, thereby, to alleviate groundwater contamination, **how that goal is met can create or hinder opportunities for the water purveyors to improve the local water resources.**" *(emphasis added)*

The installation of a sewer system poses one such opportunity: it may allow the simultaneous installation of a pipeline network for treated effluent for a low additional cost. Such a network would facilitate the future beneficial reuse of treated effluent throughout the basin, which in turn would reduce pumping demand, mitigate seawater intrusion, and improve the overall availability of water supplies.

The history of the LOWWP is one of missed opportunities, and it would regrettable if this one was missed as well. If the LOWWP is truly to provide **"the widest possible options for beneficial reuse"** – as the DEIR (p. 7-6) indicates – then it should include distribution pipelines for treated effluent – particularly if these can be installed at the same time as the sewers, for minimal additional cost and effort.

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Specific Recommendations for LOWWP

1. The current DEIR recognizes agricultural reuse and urban reuse as potentially viable "Level B" alternatives for future local implementation. Another alternative, groundwater injection, was dismissed in the DEIR as an impractical "Level C" alternative, based on a 2001 study conducted for the LOCSD. However, a more recent 2006 study for the LOCSD indicated that groundwater injection, as a form of indirect potable reuse, should be retained as an option for future local implementation. The Orange County Groundwater Replenishment System, which began operation in January 2008, has demonstrated that treated effluent can be successfully used to mitigate seawater intrusion and recharge local water supplies. For these reasons, and to maximize the available options, **the beneficial reuse of treated effluent by direct injection into groundwater should be reclassified as a potentially viable "Level B" alternative for possible future implementation.** P27-7

2. The LOWWP currently includes the installation of an extensive network of sewers and mains (influent pipelines). **The LOWWP should also include the simultaneous installation of a strategically placed network of effluent pipelines in the same excavations, as this could likely be accomplished with relatively little additional cost or effort.** An in-place network of pipelines for treated effluent would significantly reduce the costs for implementing any future beneficial reuse strategies, regardless of the exact alternative that might be selected. P27-8

3. Even if the LOWWP is not modified at this time to include installation of effluent pipelines, **this option should nonetheless be fully addressed in the environmental review and project approval processes.** It is possible that additional beneficial reuse strategies may become feasible or necessary at some future date, prior to sewer installation. If the option of adding effluent pipelines was considered during the initial review and approval processes, then the LOWWP could be readily modified to include effluent pipelines at that future time. The review and approval processes will already address the installation of influent pipelines, and so the optional installation of effluent pipelines in the same excavations could be evaluated as well, for little additional cost or effort. P27-9

Please contact me if you have any questions or comments.

Sincerely,

Steven C Beadle

Steven C. Beadle, PhD, PG, CEG, CHg, PE
Senior Associate Geologist
California Professional Geologist (6129)
California Certified Engineering Geologist (EG2098)
California Certified Hydrogeologist (HG503)
California Professional Civil Engineer (C69951)
Resident, City of Arroyo Grande, San Luis Obispo County
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cc: Mr. K.H. "Katcho" Achadjian, Supervisor, San Luis Obispo County
Mr. Bruce Gibson, Supervisor, San Luis Obispo County
Mr. Adam Hill, Supervisor, San Luis Obispo County
Mr. Frank Mecham, Supervisor, San Luis Obispo County
Mr. James R. Patterson, Supervisor, San Luis Obispo County
Mr. Chuck Cesena, President, Los Osos Community Service District
Mr. Steve Senet, Vice President, Los Osos Community Service District
Ms. Maria Kelley, Director, Los Osos Community Service District
Mr. Marshall Ochylski, Director, Los Osos Community Service District
Mr. Joe Sparks, Director, Los Osos Community Service District
Mr. John Waddell, San Luis Obispo County Dept. of Public Works
Mr. Timothy S. Cleath, Cleath & Associates
Manager, Golden State Water Company, Los Osos
Manager, S&T Mutual Water Company, Los Osos

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LFR, Steven C. Beadle, January 29, 2009 (Letter P27)

Response to Comment P27-1

This comment recommends the inclusion of beneficial reuse of treated effluent for possible future implementation. See Topical Response 3, Water Resources and the Project Scope.

Response to Comment P27-2

This comment recommends the simultaneous installation of effluent pipelines. See Topical Response 2, Project Costs.

Response to Comment P27-3

This comment expresses a desire to include the installation of effluent pipelines as part of the environmental review of the proposed project. See Topical Response 2, Project Costs.

Response to Comment P27-4

This comment expresses a concern that water supplies will continue to be severely limited, and seawater will continue to intrude into the local aquifers and these issues will still have to be addressed by the Los Osos community in the future. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P27-5

This comment expresses a desire to incorporate beneficial reuses options to replenish the groundwater. See Topical Response 3, Water Resources and the Project Scope, and Topical Response 4, Tertiary Treatment, regarding agricultural/urban reuse and groundwater replenishment.

In addition, refer to Section 3.1.2 of the Draft EIR for a discussion on the project goals and objectives including one of the secondary objectives referring to water resources. This objective states that the LOWWP would address water resource issues by mitigating the project's impacts on water supply and saltwater intrusion. Further, the wastewater project will maintain the widest possible options for beneficial reuse of treated effluent.

Response to Comment P27-6

This comment expresses a desire for the LOWWP to include distribution pipelines for treated effluent. See Topical Response 3, Water Resources and the Project Scope.

Response to Comment P27-7

This comment states that the beneficial re-use of treated effluent by direct injection into groundwater should be reclassified as a potentially viable "Level B" alternative for possible future implementation. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P27-8

This comment recommends the simultaneous installation of effluent pipelines. See Topical Response 2, Project Costs, regarding the overall project costs and cost estimates for other treatment and collection options.

Response to Comment P27-9

This comment expresses a concern regarding the environmental review associated with potential future agricultural reuse. See Topical Response 3, Water Resources and Project Scope, regarding the inclusion of reuse options and the installation of effluent pipelines. The proposed project includes the development of infrastructure for a wastewater collection, treatment and disposal system. Because the comment is outside the scope of the Draft EIR, no further response is required.

David S. Gray
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January 30, 2009

Mr. Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Dept. of Public Works
County Government Center, Room 207
San Luis Obispo. California 93408

Subject: **Modify the EIR to cover the returning all effluent water to the Basin for re-use.**
Draft Environmental Impact Report, County of San Luis Obispo,
Los Osos Valley Wastewater Project (LOWWP),
State Clearinghouse No. 2007121034, dated November 14, 2008.

Dear Mr. Hutchinson,

Modify the EIR to cover the returning all effluent water to the Los Osos Basin for re-use.

The plan now is to waste treated effluent on sprayfields. Given our water emergency, and continuing seawater intrusion, this is unconscionable. The EIR should evaluate, and strongly advocate, the return of **all** Los Osos' scarce water to its aquifer.

This need not be expensive, since effluent-return pipes can be placed in the sewer-line trenches during sewer construction. This will really cut the cost of effluent return.

P28-1

What it will take is concerted action by the water purveyors to pay their fair share of effluent return costs. But these costs will be far less than that of curing seawater contamination of the aquifer once it spreads. And the cost of recycling the effluent will be much cheaper than the cost of obtaining external water supplies.

We don't need a commitment now to do this; we do need the EIR to cover it as a desirable and viable alternative, so that it can be implemented in the future.

Thank you for your consideration.

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David S. Gray, January 30, 2009 (Letter P28)

Response to Comment P28-1

This comment recommends modifying the proposed project to return all effluent water to the Los Osos Basin for reuse. Refer to Topical Response 3, Water Resources and the Project Scope, regarding water supply and groundwater replenishment.

James W Smith
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January 29, 2009

Mr. Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Dept. of Public Works
County Government Center, Room 207
San Luis Obispo. California 93408

Subject: Re-use of effluent in the Basin
Draft Environmental Impact Report, County of San Luis Obispo,
Los Osos Valley Wastewater Project (LOWWP),
State Clearinghouse No. 2007121034, dated November 14, 2008.

Dear Mr. Hutchinson,

The EIR should include the concept of returning all effluent water to the Los Osos Basin.

Present plans are to waste 842 AFY of treated effluent on sprayfields. Because we are in a Level III water emergency, and have seawater intrusion, it would be very short sighted to waste the water. The EIR should evaluate, and strongly advocate, the return of all Los Osos' scarce water to its aquifer, by injection wells or otherwise. P29-1

Please include this as an alternative in the EIR. Then we can work on a plan to implement the water savings and prevent seawater intrusion.

Thank you for your consideration.

James W Smith

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James W. Smith, January 29, 2009 (Letter P29)

Response to Comment P29-1

This comment states that the Draft EIR should include the concept of returning all effluent water to the Los Osos Basin. Refer to Topical Response 3, Water Resources and the Project Scope, regarding water supply and groundwater replenishment.

Philip D. Gray
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January 29, 2009

Mr. Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Dept. of Public Works
County Government Center, Room 207
San Luis Obispo. California 93408

Subject: **Don't Waste the Effluent**: Provide for its Re-use in the Basin
Draft Environmental Impact Report, County of San Luis Obispo,
Los Osos Valley Wastewater Project (LOWWP),
State Clearinghouse No. 2007121034, dated November 14, 2008.

Dear Mr. Hutchinson,

The EIR should be modified to better cover the concept of returning all effluent water to the Los Osos Basin for re-use.

Present plans are to waste 842 AFY of treated effluent on sprayfields. Given our Level III water emergency, and continuing seawater intrusion, this is unconscionable. The EIR should evaluate, and strongly advocate, the return of all Los Osos' scarce water to its aquifer, by injection wells or otherwise.

This need not be expensive, since effluent-return pipes can be placed in the sewer-line trenches during sewer construction. This will really cut the cost of effluent return. P30-1

What it will take is concerted action by the water purveyors to pay their fair share of effluent return costs. But these costs will be far less than that of curing seawater contamination of the aquifer once it spreads. And the cost of recycling the effluent will be much cheaper than the cost of obtaining external water supplies.

We don't need a commitment now to do this; we do need the EIR to cover it as a desirable and viable alternative, so that it can be implemented in the future.

Thank you for your consideration.

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Philip D. Gray, January 29, 2009 (Letter P30)

Response to Comment P30-1

This comment states that the EIR should include the concept of returning all effluent water to the Los Osos Basin for re-use. Refer to Topical Response 3, Water Resources and the Project Scope, regarding water supply and groundwater replenishment.

California Native Plant Society

January 29, 2009

Mr. Mark Hutchison
Environmental Programs Manager
Dept. Public Works, SLO County
1050 Monterey Street, Room 207
San Luis Obispo, CA 93408

RE: Los Osos Wastewater Project DEIR- Comments by California Native Plant Society

Dear Mr. Hutchinson:

The California Native Plant Society is a statewide nonprofit organization of amateurs and professionals with a common interest in California's native plants. The mission of the Society is to increase understanding and appreciation of California's native plants and to preserve them in their natural habitat through scientific activities, education, and conservation. Membership is open to all.

While CNPS finds much to like in the section on Biological Impacts and their mitigation, CNPS finds the section of the DEIR on biological mitigation has some significant deficiencies.

1) There is no significant mitigation for the loss of habitat, only for the loss of species. Under the Los Osos HCP, whch appears to be on hold and in need of redesign, the totality of take of habitat for all issues concerning the sewer project and consequent post-moratorium building was to be considered. While in Mitigation 5.5-A2 the DEIR states "The project will be required to fulfill all responsibilities in the project MOU/MA regarding any state-listed species and their habitat." that are identified by state and federal wildlife agencies, no potential habitat areas for purchase or protection are anticipated or identified in the DEIR. It should be noted that the Broderson site that is cited as a mitigation location was to be compensation for the Tri-W/Midtown site habitat and species take, which has already taken place. Further mitigation, such as restoration of Tri-W/Midtown and its preservation as habitat rather than community park or development zone, would require description of Tri-W/Midtown as part of the project when acting in this function. P31-1

2) The DEIR in Mitigation 5.5-A13 defers identification of mitigation to Morro manzanita, Monterey spineflower, and Indian knob mountainbalm until after agency consultation, but anticipates "Mitigation for Morro manzanita shall include replacement at a minimum ratio of 5:1". The DEIR should have identified the need to find and include within the project a range of suitable sites, because if they do not exist, then the loss of the species becomes a Class 1 Impact. The FEIR should speak to this issue and possibly reclassify this impact. P31-2

3) The above comments on 'listed' plants should also apply to CNPS List 1 and 2 plants, given the tiny amount of dune sand habitat of this type within the state. P31-3

4) The DEIR in Mitigation 5.5-A13 speaks to the possibility of transplantation as mitigation: "Transplantation and relocation of salvaged specimens, if appropriate and feasible, should be considered during wildlife agency consultation. Salvaged specimens should be transported to an offsite location that is approved by the USFWS, and should be assessed against survival and reproduction success criteria according to a mitigation monitoring plan." CNPS does not consider the transplantation of woody shrubs such as Morro manzanita a viable option. The manzanita is deeply rooted, and does not resprout from pruned branches. In addition, the manzanita is particular as to slope aspect and other microsite features. The latter may make mitigation through planting of new specimens problematic, as can be seen in an attempted P31-4

mitigation planting at Bayview Heights Drive and Valley View in southeast Los Osos.

The CNPS Statewide policy on transplanting is provided for your information:

Policy on Transplanting
Adopted December 1989
Native plants, plant communities and their habitats on public and private lands are subject to increasing development and use pressures. Little scientific information is available on the long-term success of transplanting to mitigate impacts on the plants. The preponderance of evidence to date demonstrates that transplanting naturally occurring wild plants does not represent a successful method of long-term conservation.
Therefore --The California Native Plant Society requests all responsible agencies and persons involved with the maintenance of biological diversity and rare plant protection to: Develop and implement alternate strategies of plant and plant community protection that are realistic, well documented through long term monitoring, and aimed at the continued success of establishing and enhancing viable populations of rare plants, plant communities, and their habitats, and Use transplanting of such plants only as a mitigation method of last recourse.

P31-4 CONT

5) Mitigation 5.5F states that the three projects would not interfere with a Habitat Conservation Plan or Natural Community Conservation Plan (HCP/NCCP). This smacks of 'truthiness', as while being accurate as there is no existing HCP covering the whole South Bay, it was in preparation before the Tri-W site project was abandoned. The FEIR should address this issue in greater depth, because the interdependency of mitigation for the sewer project and design requirements for HCP/NCCP have in the past been intertwined. The HCP/NCCP could not go ahead until it had the 'take' spaces for the sewer project defined, and theoretically the DEIR (this document) should reflect the optimization of habitat-take decisions as defied in the HCP/NCCP. While this viscous cycle of cross reference is now being short circuited by this document, some reference should be made to the issue.

P31-5

6) While not an issue addressed by the DEIR, CNPS would urge that any projects or project changes do not impact the ancient dune sand ridge between the Tonini site and the old Los Osos landfill. This area contains a series of nutrient-deficient soils similar to those on which a number of rare local endemic plants are located. The project might consider protection of these sands in the collection of potential mitigation sites.

P31-6

CNPS thanks you for the opportunity to comment.

David Chipping: Conservation Chair
San Luis Obispo Chapter CNPS
1530 Bayview Height Drive
Los Osos, CA 93402

California Native Plant Society, David Chipping, January 29, 2009 (Letter P31)

Response to Comment P31-1

This comment expresses a desire for the incorporation of additional mitigation measure for habitat preservation. Preservation of the Broderson site outside of the 8 acres for the leachfield is the primary mitigation area for the loss of habitat associated with the project. While most of this habitat was covered under the previous EIR, there was no guarantee that the Los Osos Community Services District would preserve the lands and there was no Conservation Easement filed.

East of Los Osos Creek and along the south side of Los Osos Valley Road, there are no sensitive plants that would be impacted by construction or operation of the pipelines. All construction would be placed in the shoulder of the road.

Surveys of the Tonini property in both Spring 2008 and Winter 2008-2009 were undertaken and no sensitive plants were found to be impacted by any of the permanent facilities. An area of Blochman's dudleya was found in proposed sprayfield areas along Turri Road during surveys in 2009. These areas will be included within a 100 foot buffer to protect the plants.

The comment with regard to the Tri-W/Mid-town site habitat and species take is correct, the Broderson site would be used as compensation for Tri-W/Mid-town as well as compensation for the loss of 8 acres at the Broderson site. The original compensation area at Broderson also covered impacts associated with pump stations and any impacts associated with the "in-town" collection system. Since no other sensitive species or habitat would be impacted there is no need for additional compensation areas. However, since the entire Tonini property would be purchased for the project, areas not used for the wastewater treatment plant and sprayfields would be preserved. See Response to Comment P22-10.

Response to Comment P31-2

This comment expresses a desire to include reclassification of the species identified in the Draft EIR in Mitigation 5.5-A13. Since a preferred project (Appendix Q) is identified and more details on pipeline routing along Los Osos Valley Road and a final site design has been established for the Tonini site, the biological team has conducted site specific surveys along all aspects of the preferred project. These surveys conducted in late 2008 and February 2009 did not find any of the above-listed species and the need for mitigation is not required. If species are encountered during construction, the Broderson site would serve as an appropriate area for preservation and transplantation.

Response to Comment P31-3

This comment expresses a desire to include California Native Plant Society List 1 and 2 plants. Since a preferred project is identified and more details on pipeline routing along Los Osos Valley Road and a final site design has been established for the Tonini site, the biological team has conducted site specific surveys along all aspects of the preferred project. These surveys conducted in late 2008 and February 2009 did not find any of the above-listed species and the need for mitigation is not required.

If species are encountered during construction, the Broderson site would serve as an appropriate area for preservation and transplantation.

Response to Comment P31-4

This comment expresses a concern regarding the transplantation and relocation of Morro manzanita. Based on the most recent surveys, there would be no need for transplanting Morro manzanita. The disturbances associated with the Broderson leachfields would not impact any sensitive species. See Response to Comments A7-2 and A7-7. If Morro manzanita or other woody shrubs were impacted, the preservation of 72 acres in perpetuity at Broderson would be sufficient mitigation.

Response to Comment P31-5

The comment is concerned about HCP/NCCP and the issues related to it from the last project. We agree that there is no timetable for completion of the Los Osos Habitat Conservation Plan. The project was placed on hold after the collapse of the last EIR effort. The effort has not been abandoned and the County will actively pursue completion of the Plan. The County does not want the approval of the project and completion of construction of the project to be delayed while negotiations are completed. See Response to Comment A11-18 for more information on the HCP.

Response to Comment P31-6

The comment is concerned with the protection of the ancient dune ridge between the Tonini site and the old Los Osos landfill. None of the Proposed Projects (1-4) nor the preferred project would impact the ancient dune ridge between the Tonini site and the old Los Osos landfill. Areas within the Tonini that contain locally rare endemic plants have protected by buffers and the SRA already established on the property.

01/30/2009

Mark Hutchinson
Environmental Programs Manager
SLO County Dept of Public Works
County Government Center Room 207
San Luis Obispo, CA 93408

Piper Reilly
691 Woodland Drive
Los Osos, CA 93402

Re; LOWWP DEIR

In the Spring of 2002, the CCRWQCB released a report entitled Frequently Asked Questions Regarding Water Quality Issues in the Los Osos Community. Just Prior to the summary it states, "This prohibition zone will remain in place until a viable solution and waste water project is implemented: a solution which ***protects and restores the quality of Los Osos ground water basin and Morro Bay Estuary.*** I content that your proposals in this DEIR do not accomplish this.

In the Spring of 2006 I purchased my home in the Redfield Woods neighborhood of Los Osos with a clean title. 10 months later I received a NOV from the CCRWQCB, with threatened potential fines of 40 million dollars. Under these dire circumstances, I, as a lay person, in order to try to save my home for myself and my children, began to educate myself on the issues and to speak publically and on the record since the fall of 2007.

18 months ago I maintained, and continue to maintain, on the record at the weekly Board of Supervisor meetings, that we were being coerced into installing a centralized gravity system which would force a great percentage of the community out of their homes, due to the high cost (initial and life time), and which would not fix the nitrate problem but could increase it. I have also argued against the use of Broderson as a recharge site due to the risks out weighing any presumed benefits. P32-1

The CCRWQCB has water quality tests for Los Osos going back to 1969. From then until now, nitrate levels have remained fairly constant regardless of the fact that the population has dramatically increased. As of 2006, when the last Cleath & Associate tests were run, they showed the average nitrate level to be at 10.5 percent, one half a percent over drinking water standards. Since the levels had been steadily decreasing, once the wells had been properly sealed, (a chronic problem through out the years- and by the way, the well at Broderson is still unsealed...), we repeatedly asked to have them retested but were denied, presumably because current tests would show us within drinking level standards thus negating the need for a centralized sewer system. In fact, there is data showing that our septics are not the cause of the nitrate pollution and there are internal County memos stating that installing a centralized waste treatment facility will not change the nitrate levels as this DEIR is assuming it will.

So this begs the questions; Why centralized? Why gravity? And why Broderson.
All three have been pushed for heavily by certain members of the CCRWQCB and SLO County. These options come with considerable cost and dubious positive results and mean while **sustainable options are being ignored**. I do not believe you have done your due diligence. P32-1 CONT

Carollo's Carnation, Washington project's EIR has the opposite conclusion, in regard to gravity and vacuum collection, as was found with the Los Osos project. Why? In Los Osos there is even more reason to choose vacuum over gravity then there is in the Carnation project. Your argument that vacuum requires more energy then vacuum is illogical. Here, a vacuum project would require 3 lift stations where as a gravity plan requires 20. Mark Hutchinson has repeatedly stated, on the record, that all collection options would be looked at, yet vacuum was not carried through from Carrollo's original report.

Our Los Osos sands are highly unique and unpredictable further complicating maters. The sand can be hydrophobic and contain clay lenses and lamellae,(see Baywood fine sands at http/soils.usda.gov), which effect percolation. According to Cal Poly soil scientists Larry Raio and Tom Ruehr, and as indicated in the 1997 supplemental EIR, sometimes the water percolates downward, sometimes sideways and sometimes they can hold water in underground clay pond like structures which will make it far more likely to hit water when digging deep gravity trenches.

Gravity pipes are not sealed and by nature leak. This is an accepted industry fact. There is an "allowable" leakage rate in which a test section shall not exceed 500 gallons per mile, per 24 hours, per inch diameter of pipe tested at the five foot test head. That's a whole lot of poo. Industry averages show that 5% of the raw sewage running through gravity pipes leaks out on a continual basis. This does not protect our ground water as prescribed by the CCRWQCB, it causes harm. Unlike sealed low pressure systems ,which do not leak, or septic tanks which act as primary treatment facilities, gravity pipes will be leaking raw sewage directly into our ground. This is blatant pollution. What does not percolate into the upper aquifer will flow horizontally into the protected marine sanctuary, again violating CCRWQCB rule.. P32-2

These certain leaks will also quickly erode the sandy support beneath large gravity pipes, causing them to bow, thus further increasing the pressure upon the joints which could easily give way. This creates not only harmful discharge but also the ability for water to infiltrate the system. Is this why your numbers for the waste water facility are so large? Are you anticipating massive infiltration or is that for build out and beyond?

Either way there is a problem. Vacuum or STEP/STEG , which are both sealed, low pressure systems, would solve your I/I and exfiltration issues. They are also faster, cheaper and less intrusive to install. I believe you have underestimated your costs for sealed gravity pipes. Their material cost **and** installation costs are much greater. Is that to be factored in later as change orders? Where is the additional cost for de-watering trenches for gravity installation? Because of the unique Baywood sand and clay shales in our area, you will hit ground water more than you would under normal circumstances.

This water will also need to be cleaned before it can be disposed of. Small diameter pipes and directional boring or small trenching is much less expensive and time consuming than attempting to install large welded gravity pipes into deep shored trenches. Such gravity installation would not only increase cost but it will also increase air pollution as large cranes and welding equipment and much more time would be needed to complete the job.

P32-2
CONT

If the increased size of the treatment plant is not due to I/I but you are planning for build out, this violates 218 law. You can not build anything of general benefit and you can not assume that the vacant lot owners will pass the next 218. Why should they? They, unlike us, do not have the threat of astronomical fines hanging over their heads and they do not have a guarantee of available water. We could be in a level three water severity for quite some time. (Under the proposals in this DEIR, that is highly probable) Since there is no guarantee that the vacant lot owners will ever be able to develop their properties with in the Prohibition Zone why should they assess themselves for $25,000? In our 218 vote, we were all under the threat of losing our homes if we did not vote yes. Under our conditions, 30 percent of the population did not vote at all and of the remaining **residents**, (those who are not government, schools or businesses), 56% voted yes and 44% no. This 80% 20% figure you keep using is misleading and Paavo Ogren is on record at a Board of Supervisors meeting confirming the 56% 44% numbers.

Your current disposal, (which should be **RE-USE**), option throws most of our water, (a precious and dwindling global resource), into the wind outside of our water basin. I wonder how the National Resource Defense Council would view that? Because it is uncertain if Broderson will percolate downward and could flow into the Morro Bay protected marine sanctuary,(according to Cal Poly Soil Scientists Larry Raio, Tom Ruehr and 1997 Supplemental EIR) this will not aid in recharge nor halt salt water intrusion. Again, according to Cal Poly Soil Scientists, Larry Raio, Tom Ruehr and the findings of the 1997 supplemental EIR, Broderson may result in daylighting of the discharged treated effluent and will create an increase for liquefaction. Paavo Ogren has also repeatedly stated, on the record, that Broderson may not work. That it will be monitored and abandoned if it does not.

P32-3

Unfortunately, monitoring may not be enough and finding out that it isn't working may come too late. Due to the soil conditions, (lamellae), liquefaction conditions are probable, (1997 supplemental EIR), and as soon as we have any sort of an earth quake, the neighborhood of Redfield Woods, along with our Emergency Services Department (they are also located here and were damaged in the last quake) could slide. Gas mains could rupture, causing fires, and deep trenched, large gravity pipes are far more likely to break then small diameter low pressure pipes located near the surface. Because Los Osos is in a high risk area, due to the many fault lines, you put the neighborhood of Redfield woods at an unnecessary risk for a component of the project that may not even have any benefits. If it goes wrong, there could be landslides, large property damage and deaths and you will be sued. Also using Broderson, unfairly puts those residents in a situation where it would behoove them to acquire earthquake insurance, further increasing their monthly costs.

By putting the treated effluent up on Broderson, you are reintroducing emerging contaminants and endocrine disputers which you have just removed. These harmful elements will either seep into the aquifers or out to the bay, either way, violating CCRWQCB rule and common sense!

You do not put effluent in drinking water, that is why ocean outfall is practiced.
Whereas ocean outfall may not pollute drinking water, it is wasteful, therefore ag exchange should be utilized and could be easily accomplished with real due diligence or a few phone calls.

Once all of the septics are taken off line, more than a million gallons of water per day will be removed from the Los Osos ground. This will have an adverse effect on the plants that grow here. As they die, habitat will be destroyed and loss of animals will follow. From the Morro Bay banded snail to top predatory birds, all creatures will be effected adversely. Lose of plant life will also increase drought conditions which are already expected to worsen due global warming and this unnecessary lose of plants life itself will further exacerbate climate change. Non of this is helpful in regards to AB32.

This vicious cycle will also increase salt water intrusion. As we dry up the land, by removing septic recharge and plant life, additional recharge by precipitation, (which is expected to decrease due to global warming), will become less effective. As our upper aquifer diminishes, (all on its own, with out us pumping one drop), sea level rise, due to global warming, will further increase salt water intrusion. According to the 1997 supplemental EIR and expert testimony by soil scientist Reuhr and Raio, the use of Broderson will not mitigate these factors.

P32-3
CONT

Your conservation element, which is your salt water intrusion mediation, is way too little, way too late. Why should it only involve ½ of the town when we are all dependant upon the same water which is all at a level three water severity. I don't think you have enough money allocated to even replace the toilets in the PZ and how can you know? There has never been a study. In the past year, not only has their been virtually no information disseminated to the public about waste water systems, you have also not asked the residents anything, (I am not counting the STEP survey debacle) Is their any real data on the PZ? How many people have low flow fixtures? How about their median house hold income? The last census was in 2001 and it was for all of Los Osos. I was unaware that an EIR could be based upon assumption, guess work and hope.

Why should we buy 600 plus acres when we need less than a tenth of that for a treatment facility?
Are we to become the sludge facility for the County? And why would we pay 25 million for secondary treatment, which would create abundant sludge, when we could have tertiary ponds for 13 million or bio membrane tertiary treatment for 9 million with minimal to no sludge? Why was Carrollo's re-use element for their Petaluma project not examined for use here? How about Ag exchange? Why has that not been investigated? There are plenty of farmers locally who would gladly use our treated effluent instead of pumping from wells. We have contacted them. We have also come up with sound plans for balancing the basin, through a real conservation plan and have been ignored. Why? All of this; conservation plans, ag exchange, inexpensive tertiary treatment options, inexpensive and environmentally sound vacuum collection, STEG cluster systems, have all been submitted to the County. Where are they?

P32-4

Now the County wants to augment the design build process and the wording of the RFQ is so limiting that few ,if any bidders, outside of Montgomery Watson Harza, remain. It is time for you to lay out all reasonable, sustainable options on the table fairly and openly and stop stacking the deck in favor of Montgomery Watson Harza's gravity plan which was thrown out in 2005.

P32-5

I contend that AB2701 puts you in a position to address our salt water intrusion problems which were greatly exacerbated when the County built 1,100 in the 1980's during a building moratorium. The County should be seen as having a fiduciary duty regarding Los Osos and not be creating a situation to exploit our community and it's resources. By creating the most expensive waste water project in this Country's history, the County sets itself up to make a hefty commission. By installing a collection system which inherently leaks, Los Osos could be subject to more fines by the CCRWQCB and is put in a situation where there will be immediate costs for repair/upgrade. This includes your treatment design. Words like coercion, collusion, and constructive fraud could be bandied about. For everyone's benefit, lets get this right the first time because as it stands now, your current proposal is not only unsustainable it's harmful.

P32-5
CONT

I do not believe that the County has preformed its due diligence in examining collection, treatment nor ***re-use***, (*disposal* should, at this juncture in our history, be illegal). In conclusion, your DEIR is incomplete and flawed, not to mention extremely cumbersome. The assertions I have made in this document have also been made at Board of Supervisors meetings over the past 18 months. I have them all in writing and they are all on record in the BOS archives. Any questions I have asked in the past have been ignored. I look forward to your response.

Piper Reilly
Los Osos Prohibition Zone Resident
Los Osos Sustainabilty Group Member

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Piper Reilly, January 30, 2009 (Letter P32)

Response to Comment P32-1

This comment expresses a concern regarding the protection and restoration of quality of the Los Osos groundwater basin and the Morro Bay Estuary. The level of participation of this commentor and others in the public process is acknowledged. The project team has consulted with staff of the Regional Water Quality Control Board on numerous occasions and is convinced that a project that meets the discharge requirements listed in Table 3-1 in Section 3 of the EIR will satisfy the requirements of the RWQCB.

With respect to the issue of nitrate levels in the groundwater, see Response to Comment A8-36. Various alternatives have been vetted and analyzed in the Rough Screening Report, Fine Screening Report, 12 technical memorandums and the Draft EIR. Given the complexity of the issues and the number of alternatives reviewed, it is expected that members of the public and agency representatives may come to different conclusions.

Response to Comment P32-2

This comment expresses a concern regarding leaks from the proposed gravity system pipes and recommends the use of a vacuum or STEP/STEG system. See Topical Response 5, Alternative Collection Systems, regarding alternative collection systems and Response to Comment A3-7 regarding dewatering impacts.

Response to Comment P32-3

This comment expresses a concern regarding saltwater intrusion and recommends the inclusion of more extensive conservation efforts. See Response to Comment P55-11 regarding a second 218 vote. See Topical Response 3, Water Resources and the Project Scope, regarding water supply and Topical Response 8, The Broderson Leachfield, regarding the Broderson site. Ocean outfall and surface water discharge options have been strongly discouraged by both the RWQCB and the Coastal Commission. See Topical Response 9, Water Conservation Measures, regarding the conservation components of the project.

Response to Comment P32-4

This comment expresses a concern regarding use of the proposed facility and alternative treatment options. The project is not proposed to accept sludge or septage from areas outside of Los Osos. See Topical Response 6, Alternative Treatment Systems, regarding alternative treatment systems. See Topical Response 10, Infiltration, Inflow, and Exfiltration. The wetland pond constructed at the Petaluma Wastewater Treatment Plant was constructed in response to a strongly held community environmental value. This amenity is supported by fully treated wastewater effluent and is not a necessary part of the treatment or effluent disposal process. Also, see Topical Response 3, Water Resources and the Project Scope, regarding water resources.

Response to Comment P32-5

The comment expresses concern about the fairness of the design build process. The Design Build process is structured to elicit a range of proposals, including new technologies, and is not focused solely on the previous project's design. However, the previous design was paid for by the community, permitted by several agencies, and proceeded to construction. The County believes that the wastewater collection system designed by Montgomery Watson Harza (MWH) for the Los Osos CSD is adequate. MWH is an integrated engineering-construction company that has provided environmental engineering, construction, technology and management services to local, state, federal government and private agencies since 1844. The company has 170 offices worldwide with 7,000 employees operating in 35 countries. MWH has designed literally hundreds of wastewater collection systems and is a highly regarded firm. See Topical Response 3, Water Resources and the Project Scope, regarding water resources. The County does not make any sort of "commission" from building public works projects. See Topical Response 10, Infiltration, Inflow, and Exfiltration, regarding infiltration and exfiltration.

To: Mark Hutchinson 1/30/09
mhutchinson@co.slo.ca.us
Environmental Programs Manager
San Luis Obispo County Dept of Public Works
County Government Center Room 207
San Luis Obispo, CA 93408
State Clearinghouse Number: 2007121034

From: Lawson Schaller
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2401 Alexander Ave
Los Osos CA 93402

Mr. Hutchinson and others:

Please see my comments below regarding the DEIR on the LOWWP.

I appreciate the progress the County has made to date on the LOWWP and look forward to a completed project. I also appreciate the opportunity to make comment on the DEIR.

As a homeowner who (like others) has committed $25,000 or more to the LOWWP I have concerns over the thoroughness and proper analysis within the DEIR. I want the best value for our community while protecting our aquifer and the National Estuary. In order to assure the best value we need current objective information in which to base the final analysis. It is my opinion that the DEIR needs more work. More analysis and review is needed and corresponding re-calculations need to be completed. This updated information in the DEIR needs to be re-published for further public review and more comment.

Agricultural Exchange/Reuse

The DEIR suggests that an agricultural reuse/exchange program may take up to 20 years to establish. The time frame stated in the DEIR is inconsistent with information from professionals in the field. The DEIR needs to include current objective factual information from successful programs using recycled water for agricultural use. The County has requested that comments be based on fact, reasonable assumptions based upon fact, or expert opinions. P33-1

The DEIR consultants need to contact professionals in the field and correct/update the data in the DEIR and re analyze the use of recycled water on agricultural land and its potential environmental impacts.

It is realistic to implement recycled water for agricultural use so that it comes on line simultaneously with the completion of the LOWWP. Recycled water use on agricultural land is a widely accepted and established practice.

In speaking with water recycling expert Dr. Bahman Shiekh, and others about agricultural reuse, I was informed of some facts, gathered expert opinions, and made reasonable assumptions based on fact. I have summarized them here.

Other counties have recycled water programs for agricultural use. Monterey County has approximately 12,000 acres of agricultural land currently using recycled water from local waste water treatment facilities in Marina. This has been a successful ongoing program for 12 years, with 95% of the farmers within the recycled service area voluntarily accepting and using the recycled water. Orange County has had a successful program for approximately 30 years, with recycled water produced by Irvine Ranch Water District used for growing a variety of vegetable crops. Santa Rosa and Watsonville are implementing water recycling programs for irrigation of agricultural land. This is an established practice by the farming community and recycled water is commonly used by certified organic farmers. Agricultural irrigation using recycled water is widely accepted by farmers now. It is proven, successful, reliable and sustainable.

In Dr. Shiekh's expert opinion, it is reasonable to assume based on fact, that farmers in the Los Osos Valley could be accepting recycled water soon after, if not immediately after the LOWWP is complete and producing recycled water; an approximate time line of 1.5 to 2 years-during the construction period. This time frame is in stark contrast to the DEIR assumption. Dr. Shiekh acknowledged the time necessary and the need to negotiate prices and other details in order to bring the farmers to an agreement (letter of intent or contract) for accepting the recycled water. He also pointed out the need to have tertiary treatment so as to permit unrestricted irrigation use of the recycled water.

P33-1
CONT

Several prominent farmers from Los Osos have gone to Monterey County to see the recycled water program and speak first hand to farmers that are using recycled water. Several Los Osos farmers expressed interest in using recycled water from the LOWWP. I have personally spoken to a Los Osos grower who expressed interest in using recycled water for the LOWWP. His concerns were price and whether or not the water would be delivered under pressure. The interest is there.

In recent conversations with Los Osos farmers Dr. Shiekh and his colleagues were told that the farmers' wells were producing less water each year and they reiterated their interest in having a reliable, drought resistant, recycled water source. Dr. Shiekh expressed and emphasized the view that Los Osos may be missing a valuable opportunity to use recycled water (with inherent beneficial nutrients), reduce pumping demand on our potable ground water, and alleviate salt water intrusion. In essence we have an opportunity to balance and protect our basin by using recycled water beneficially on the basin.

It is reasonable to assume that by spraying/disposing of recycled water on the Tonini spray fields there is a potential negative environmental impact on the Los Osos aquifers. The DEIR should provide further evaluation and/or a re-analysis of the assumptions that the DEIR used to suggest a twenty year implementation schedule for ag reuse. There is also justification to request further analysis regarding the potential of a positive environmental impact on the Los Osos aquifer with the immediate implementation of an ag reuse program.

I also spoke with Bob Holden, Principal Engineer, Monterey Regional Water Pollution Control Agency. Mr. Holden was directly involved in managing, overseeing the recycled water program at MRWPCA, he is still very involved in the program. Mr. Holden informed me that farmers/growers in his area are currently on a waiting list to use the recycled water for agricultural use. The recycled water with its high quality, beneficial nutrients, and reliable drought resistant supply is highly sought after. Mr. Holden explained that farmers and growers from Oregon to Southern California (as well as from around the world) have toured their facility and the nearby farms that use the recycled water for irrigation. Mr. Holden went on to say that the visiting farmers (including those from Los Osos) were positively impressed with the use of recycled water and it was well received. In his professional opinion bringing new farmers into agreement and using recycled water would likely take 1 to 2 years. Again, this is in stark contrast to the DEIR time line of 20 years. Mr. Holden explained that he met with growers in Santa Barbara County to assist them in the use of recycled water for ag use; recycled water is being used by growers in Los Angeles County; Oxnard is implementing a recycled water program for agricultural use. P33-2

I also spoke with Mark Moya with the Laguna County Sanitation District which operates with in Santa Barbara County in the Orcutt Area. Mr. Moya explained that they are using recycled water on agricultural land and also on pasture land for cattle feed. This is a successful program.

All of the field professional's I have spoken with expressed some level of surprise or questioned the logic of using highly valuable water on grass in spray fields only to cut and haul the grass to the land field.

In this era of drought and over pumping of ground water we must give strong consideration to using recycled water for agricultural irrigation. To not do so falls outside of the common accepted practice of using recycled water for agricultural use. Many counties and cities are currently using or implementing programs to use recycled water for agricultural use.

The DEIR should provide broader and deeper analysis in regard to the potential significant negative environmental impact of not using recycled water on ag land. Per the DEIR page 5.2-5, section 5.2.3a-b, "…according to CEQA Guidelines…would the project: substantially deplete…or otherwise substantially degrade water quality".

Spray Fields

The Tonini spray fields, as stated in the DEIR, are a disposal option. The operative word is disposal, as opposed to reuse. This water is far too valuable of a resource to dispose of outside the basin without some mitigation value. Based on the aforementioned comments from professionals in the recycled water industry, it is clear that the use of recycled water on viable economic agricultural land has distinct advantages. The DEIR should include thorough analysis of the environmental impacts on water quality, air quality, traffic impacts, land fill capacity and other factors associated with the spraying of effluent and cutting of grass several times a year and hauling it to the landfill.

P33-3

Water Conservation

Per the DEIR page 5.2-5, section 5.2.3a-b, "…according to CEQA Guidelines…would the project: substantially deplete…or otherwise substantially degrade water quality". It is important to note that not implementing thorough water conservation may result in substantial depletion or degradation of water quality, a significant environmental impact.

Conservation goals stated in the DEIR are 10% by 2020. California Assembly Bill 49 has a goal of 20% by 2020. Implementing intensive conservation, immediately after the county accepts the project is critical. The DEIR states (p.2-13)…"proposed projects *may* include the proposed water conservation measures, which mandate that property owners retrofit… with low flow fixtures…prior to hooking up to the sewer." In this section "*may* include" should be changed to "*must* include…" If '*may'*, turns out to be '*may not*', then not mandating water conservation will result in significant negative environmental impacts to water quality. It is widely accepted among experts and many studies show tremendous water savings and positive environmental impacts by implementing high efficiency fixtures.

P33-4

The DEIR cannot accurately estimate or predict water conservation without reliable data showing current conservation measures in Los Osos (ie percentage of homes with low flow toilets etc). The DEIR should include a survey establishing the necessary baseline data needed to accurately establish and forecast conservation goals and the likely impacts on the environment. Without baseline data, it seems the current DEIR cannot come to an accurate conclusion, without making broad (perhaps incorrect) assumptions, concerning environmental impacts in respect to a conservation plan. The DEIR should include further analysis on conservation and its potential environmental impacts (such as increased salt water intrusion that depletes and degrades the aquifer). The DEIR does not specify how it will measure and determine if conservation efforts are effective in reducing salt water intrusion. The DEIR should include detailed information on how the LOWWP will measure the effectiveness of its conservation efforts as it relates to salt water intrusion.

Additionally, there is great concern and some confusion in the community as to why the county is establishing a low goal of 10% by 2020, as well as delaying other action steps.

There appears to be a response from the County that the priority is to build the LOWWP with minimal costs initially. And then as time allows more conservation, ag exchange, and a higher level of treatment could be pursued; in my interpretation the County is suggesting that the costs of these delayed steps and upgrades could then be distributed across the entire basin, including purveyors, as opposed to only the Prohibition Zone shouldering these costs. If this is an accurate perspective as to why the county is delaying some of these measures then I suggest the county produce a parallel or supplemental document that explains its intentions in regard to long term planning. This would likely alleviate many concerns and criticisms. However concerns will remain that by delaying certain measures, steps or upgrades to the LOWWP, the County runs the risk that these critical upgrades may not happen due to political issues (ie 218 vote), budget/cost concerns, community acceptance, regulatory changes etc.

P33-4 CONT

Gray Water

The DEIR does not properly analyze gray water use. Gray water use has the potential to reduce potable water pumping demand and also provide a recharge element for the aquifer. Use of gray water reduces the flows of waste water to the treatment site. The DEIR should provide analysis and evaluation of gray water use and its potential environmental impact.

P33-5

Low Impact Development Technologies (LID)

The DEIR does not properly analyze the positive environmental impacts as it relates to implementing LID. During the installation of the collection system large areas of impervious surfaces will be removed and/or disrupted. Some parts of the impervious surfaces could be replaced with pervious paving-surfacing options that would mitigate/manage storm water and allow it to percolate and recharge the Los Osos basin. The City of Seattle has obtained large grants (offsetting costs) specifically for using LID strategies (bio retention, bio swales) in conjunction with the installation of the collection system. The Central Coast LID Center (in SLO) has had success implementing this type of strategy.

Storm water is a growing area of concern with regulatory agencies and environmental groups. The County has a valuable opportunity in working with other departments and agencies addressing storm water management with LID strategies in conjunction with the LOWWP.

P33-6

The use of abandoned septic tanks for rain water catchment provides opportunity to reduce storm water runoff and basin recharge. Gutters can be directed to the abandoned septic tank. Rain water can then flow passively to the existing leach field and recharge the basin. The rain water could also be pumped from the septic tank for onsite landscaping irrigation.

These are a few LID examples that the DEIR has not fully considered and analyzed. The DEIR should provide the analysis and evaluation of LID in regards to its potential environmental impact on this project.

P33-6 CONT

Collection systems

The DEIR repeatedly states that pumping of septic/interceptor tanks needs to take place every five years. The Counties tech memo suggests a pumping schedule of every 10 years. I have spoken with industry professionals, and Los Osos homeowners, and their experience supports the 10+ year interval as more accurate. The DEIR needs to recalculate the total costs and associated environmental impacts with a 10 year pumping schedule compared to a 5 year schedule. In addition the DEIR needs to provide analysis on pumping intervals on an 'as needed basis per inspections', which many professionals think may be the best method to determine the need for pumping. This was acknowledged at a 1/29/09 Los Osos CSD meeting by the district engineer. Homes will have vastly different waste flows in both quantity and quality (based on number of occupants, efficiency of fixtures, cleaning habits, etc.) and therefore will likely need different pumping schedules.

The DEIR lacks the data and proper analysis of placing individual tanks and/or cluster tanks in the public right of way. The county has large right of ways in Los Osos. Analysis should be included with the interceptor tanks off of private property. The option of cluster tanks in the right of way may also have a large influence on public perception and acceptance as it relates to the upcoming community survey. The DEIR should provide analysis of environmental impacts based on tank cluster modeling, and also on individual tanks in public right of way.

P33-7

The DEIR lacks current I/I – exfiltration data on recently installed gravity collection systems. Older historical data shows excessive I/I rates, presumably due to clay pipe construction, this needs clarification. The DEIR should include modern material construction-installation I/I data for gravity collection. The DEIR appears to assume better performance with new materials but no recent specific data seems to supports this. The DEIR also lacks significant data on pump and pocket pump failures on installations near coastal waters. It lacks sufficient recent historical information and data relating to spills, cleanup costs, and fines in relation to pump failures; the DEIR should include this information and then recalculate costs and potential significant negative environmental impacts.

There is concern that some collection systems may not be compatible with intensive water conservation efforts. The DEIR should have data clearly showing that sufficient slope exists in the installation of gravity collection that accommodates current and future intensive conservation measures. This again emphasizes the need for a recent conservation survey (baseline data) in order to extrapolate future flows. Many gravity systems require regularly scheduled flushing in order to remove collected solids. The water used to remove collected solids can outweigh water saved through conservation. The DEIR should show complete analysis of the environmental impact due to the

continued prolonged maintenance and use of water to flush/remove collected solids in a collection system; specifically detailing the volumes of water needed on an ongoing annual basis, where it is pumped, and its impact on the aquifer(s).

The maintenance schedules, costs and electrical demands (kWh/af) of the collection systems and their environmental impacts need re-evaluation. There is conflicting data between the DEIR and other documents prepared by professional engineers. See Los Osos Wastewater Management Update by Ripley Pacific. Specifically see tech memo #8 (*and important to note this document has an engineer's stamp…not all documents have an engineer's stamp*), table 8.3 provides direct comparisons of gravity and step. Figure 8.1 is also of interest showing annual power requirements and costs. The DEIR should include thorough analysis and sound conclusive reasons as to why these discrepancies exist and why any reports or sections of reports have been dismissed or ignored.

P33-7
CONT

Broderson Leach Field

The use of Broderson as a leach field has long been controversial. Expert opinions have been gathered, and conflicting opinions exist. Supporting documentation is on file with the County and the Los Osos CSD. The application rates on Broderson have been drastically reduced from the original calculated estimates to a point that the County is essentially suggesting a trial and error process to see what application rate Broderson can accept (this may turn out to be a very expensive experiment). Given the conflicting expert opinions and lack of broad consensus from the scientific community the DEIR should closely re-evaluate the safety and recharge effectiveness of the proposed Broderson leach field - its potential environmental impacts vs. potential benefit.

P33-8

The DEIR suggests the leach field be ripped or disked every five to ten years for maintenance, rebuilding/reconditioning. The proposed leach field area does not appear to have been thoroughly tested with the application of treated effluent. Is there documented data that can show how often the leach field rebuilding may need to be done based upon extensive testing with treated effluent? It may need to be ripped or disked every two to three years. The DEIR needs to include data (using treated effluent) and analysis reflecting the total environmental impacts in relation to a more frequent ripping/rebuilding/reconditioning schedule of the proposed Broderson leach field.

Closing comment

Again, I thank the County for its progress to date and I appreciate the opportunity to comment on the DEIR. I look forward to complete responses from the County and its consultants addressing the community's comments and concerns. I also look forward to a completed best value LOWWP.

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Lawson Schaller, January 30, 2009 (Letter P33)

Response to Comment P33-1

This comment expresses a desire to use recycled water to protect the Los Osos Basin and support agricultural uses. See Topical Response 4, Tertiary Treatment, regarding the feasibility of agricultural exchange or re-use.

Response to Comment P33-2

This comment expresses a desire for additional analysis on the potential impacts of not using recycled water for agricultural purposes. See Topical Response 4, Tertiary Treatment, regarding the feasibility of agricultural exchange or re-use.

Response to Comment P33-3

This comment expresses a concern regarding the disposal component of the Tonini sprayfields and states that agricultural re-use has distinct advantages. See Topical Response 3, Water Resources and Project Scope, regarding the wastewater project approach. The proposed project includes the development of infrastructure for a wastewater collection, treatment, and disposal system. Because the comment is outside the scope of the Draft EIR, no further response is required.

Response to Comment P33-4

This comment expresses a concern regarding the degradation of groundwater quality from the lack of water conservation efforts. See Topical Response 9, Water Conservation Measures, regarding what conservation measures will be implemented and what funding is available. According to Topical Response 9, the project does not prevent the community from achieving higher water use reductions through the development and implementation of more sophisticated, or more restrictive, mandatory conservation measures.

Also see page 3-42 of the Draft EIR for a more detailed explanation of water conservation measures included within the proposed project.

Response to Comment P33-5

This comment expresses the desire for the inclusion of gray water as a resource to reduce potable water pumping demand. The proposed project will address water resource issues by mitigating the projects impact on water supply and will maintain the widest possible options for beneficial reuse of treated effluent. Because the comment is outside the scope of the Draft EIR, no further response is required.

Response to Comment P33-6

This comment expresses a desire for the inclusion of Low Impact Developments and storm water management to recharge the Los Osos Basin. See Topical Response 11, Construction and Post-Construction Stormwater, and Response to Comments A4-11 and A8-90. The proposed project includes the development of infrastructure for a wastewater collection, treatment, and disposal system.

Response to Comment P33-7

This comment expresses a desire for a decentralized system that includes cluster tanks. See Topical Response 2, Project Costs, regarding the collection systems cost. This comment also expresses a concern regarding exfiltration data associated with the gravity collection system. See Topical Response 10, Infiltration, Inflow, and Exfiltration, regarding infiltration and exfiltration rates for the pipe joint alternatives. See Technical Memorandum, Decentralized Treatment, provided by Carollo Engineers, regarding the difference between a STEP/STEG collection system and a gravity collection system.

Response to Comment P33-8

This comment expresses a concern regarding the frequency of reconstruction at the Broderson leachfield, stating reconstruction may take place every 2 to 3 years. On page 3-43 of the Draft EIR it states estimated frequency is between 5 to 10 years. The Draft EIR provides a conservative estimate according to Appendix B, Project Description, and the April 2008 Carollo Technical Memorandum which state that reconstruction would take place approximately every 10 years or more.

Page I

To: MARK Hutchinson
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County Government Center Rm. 207
San Luis Obispo, Ca. 93408

From: Ben DiFatta 2170 Buckskin Dr. Los Osos 93402

Dear Mark, Enclose find my comments regarding the Los Osos wastewater project for the Prohibition Zone.

Affordability: Having being a licensed Real Estate Broker for over 40 years and semi-retired I have seen the economy go up & down for many years. Los Osos right now is the cheapest place to live between San Diego & San Francisco. There are about 30% retired, about 30% low income and 30% Low-medium income and its fair to say that 10% make a decent income.

P34-1

The cost of a very expensive wastewater project will displace at least 50% of those homeowners and Renters of those in the Prohibition Zone. This must not happen to Los Osos.

Page I

page II DEIR remarks.

Gravity Project,

Gravity is an antiquated system, it is not Green. It requires large pipes which are prone to leak (Regulations allow them to leak as much as 500 Gallons per mile per day). This is unexceptable for Los Osos. We have high ground water and would evently leak in the Bay.

These large pipe in hilly parts of the Zone may have to be as deep as 15 feet.

Many native indians (for 5,000 yrs) are buried in the Prohibition Zone. P34-1

This is not acceptable and would be costly to have them reinterned.

We are talking a minimum of 50 miles of digging up streets.

Whats routed under our streets are poorly recorded on maps.

The collection project is 70% the cost of the whole project. There are new technologys to reduce this cost by over 50%.

By

Page III DEIR remarks.

Regarding the treatment plant and site,

Big Wastewater treatment plants are not for little towns.
They are costly, smelly and have high operating & maintenance cost. Like the Gravity Collection system it also is Antiquited and not Green. High cost to keep the noise ~~is~~ generation down P34-2
Its 3,000 yr old technolog is out of Synch for the 21 century.

Alternatives are up to date & green. There are many technologys available

The people of Los Osos do not want to spend their money on glitz or Gold plated pipes.

Siting of 640 Acres is not needed. The Tonini land is in an agriculture site. P34-3
Some bldgs. are of historical Concerns.

Page III

Page IV DEIR remarks.

Regarding The BRODERSON Disposal site,

The disposal discharge went from 800 000 Gallons a day to 400,000 Gallons a day. It is situated at a very high place overlooking many homes.

Remember the little town of La Conchita where the hill came down and wipe out homes & killed 8 people this was caused by the overwaters of sandy earth by a farmer up above La Conchita's soil is simular to ours.

P34-4

This disposal site is not a very smart location and should be avoided like the plague.

It is wrong to endanger the homeowners and public.

The original study which was signed off by this County's engineering & the RWQCB board was a fatal mistake/flaw regarding the recharge process. They can not be trusted.

Page IV

Page V(A) EDIR remarks,

Regarding suggestions of Alternatives.

The Air/Vac collection system is what we need. Now regarded as the system of Choice. Air/Vac is providing Efficient and Reliable service to communities all over the World and the cost saving potential is as great as ever.

Reduced Construction Cost with the smaller diameter pipes & shallow, narrow trenches and avoid the dangers of deeper trenches.

P34-5

3 homes to one unit placed in a right of way, not on Homeowners Property

Very low O & M. because Vacuum is a sealed system, infiltration and inflow are eliminated, reducing O & M, as well as treatment cost.

Simple design, no electricity needed. Easily installed, personnel are not exposed to raw sewage and no Man Holes need. Over 100,000 installed.

Page V (A)

Page V (B) D.E.I.R remarks

My recommendation is the ECO-FLUID U.S.B.F. for wastewater Treatment.

It uses so much less Electricity and has a more compact design than the Oxidation ditch discussed in the R.F.G. Yet it was not considered. Why? Why wasn't the reduction of the overall Carbon footprint of the project considered & brought forward?

Eco-Fluid cost so much less to build with its tertiary treatment, than an Oxidation Ditch that would have to be installed at a later date, was it not considered?

The Eco-Fluid's system requires much less hauling away the sludge. yet was not considered.

Page V B

Ben DiFatta, January 30, 2009 (Letter P34)

Response to Comment P34-1

This comment expresses a concern regarding the allocation of costs and the impacts on the local community. See Topical Response 2, Project Costs, regarding the overall cost of the project and cost estimates for other treatment and collection options.

Response to Comment P34-2

The comment states that big wastewater treatment plants are not for little towns. They are costly, smelly and have high operating and maintenance costs. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P34-3

The comment is concerned about buildings on the Tonini site that may be of historical concern. See Response to Comment A8-119.

Response to Comment P34-4

This comment is concerned about treated effluent discharged at the Broderson site. Based on the Preliminary Geotechnical Report that was prepared by Fugro in May 2008, the proposed disposal sites, including Broderson, would not be affected by landsliding.

Response to Comment P34-5

This comment recommends the use of air and vacuum collection system as an alternative technology. See Topical Response 5, Alternative Collection Systems.

Response to the Los Osos Wastewater Project Draft EIR;

The Los Osos Wastewater Project Draft EIR makes numerous references to the 2005 Draft Los Osos Habitat Conservation Plan, relies on it for technical information, and appears to have the goal of complying with it. The LOWPDEIR makes predictions on future conflicts or lack thereof with a Final LOHCP. As stated in the LOWPDEIR, the DLOHCP has not been adopted or implemented. I fine no timetable, either required or predicted, for adoption or implementation in the LOWPDEIR. Also, I'm not aware of any progress towards finalizing the LOHCP in the last three years, giving the appearance that the effort has been abandoned. It is worthy of note that the EIR for the previous sewer project required the preparation and implementation of a LOHCP (Mitigation measure BIO-16)
In my opinion it is impossible to claim lack of conflict with a future plan and this is a flaw in the LOWPDEIR.

P35-1

Rex Wolf
1560 17th
Los Osos, CA

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Rex Wolf, January 30, 2009 (Letter P35)

Response to Comment P35-1

This comment expresses a concern regarding the Draft EIR's claim that there will be a lack of conflict with the LOHCP. See Response to Comments A11-18 and P31-5.

Surfrider Foundation

San Luis Bay Chapter

January 30, 2009

Mark Hutchinson
Environmental Programs Manager
San Luis Obispo County Dept of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408
State Clearinghouse No: 2007121034

RE: Draft Environmental Impact Report for the Los Osos Wastewater Project

Dear Mr. Hutchinson,

I am writing on behalf of the Surfrider Foundation, San Luis Bay Chapter in regard to the Draft Environmental Impact Report ("DEIR") for the Los Osos Wastewater Treatment Project ("LOWWP"). The Surfrider Foundation is a grassroots environmental organization dedicated to the protection and enjoyment of our coasts and oceans by all people.

The complex water supply and treatment challenges of the Central Coast require creative solutions, and specifically, the LOWWP is an opportunity to implement best available sustainable water management and sewage treatment techniques. We appreciate the County's commitment to provide a co-equal analysis of various project components and alternatives, and we believe that through a thorough and rigorous public process a truly sustainable project can be arrived at for the Los Osos community.

On September 9, 2008, Surfrider and the Santa Lucia Chapter of the Sierra Club ("Sierra Club") presented to the San Luis Obispo County Board of Supervisors the work product of Surfrider, Sierra Club, SLO Green Build, Terra Foundation, Los Osos Sustainability Group and the Northern Chumash Tribal Council entitled, *Statement of Key Environmental Issues for the Collection System of the Los Osos Wastewater Treatment Project* ("KEIS"). This work product had been requested by the San Luis Obispo ("SLO") County Board of Supervisors Chairman Patterson and we acknowledged his request prior to the release of the DEIR and the release of the NWRI Independent Peer Review ("IPR") Report. Having now reviewed the NWRI IPR Report released October 23, 2008 and well as the DEIR released November 14, 2008, Surfrider continues to stand behind the *KEIS* work product in its entirety. We are resubmitting the KEIS (Attachment II) as comment on the DEIR, as the DEIR does not reflect the comments and information put forth in the KEIS as given due diligence. Additionally, we are resubmitting for the record our comments on the Notice of Preparation for the LOWWP as Attachment I, which documents the original

P36-1

submittal of our comments before the January 17, 2008 deadline and present omission from Table 2-5 of the DEIR.[i]

P36-1 CONT

Please accept the following additional comments on behalf of our organization:

History and Location

The Environmental Setting portion of the DEIR (Section 4) is inadequate at present, as it does not adequately characterize the current environmental setting of Los Osos as required by CEQA (*CEQA Guidelines* §15125(c)). Despite being mentioned in the secondary objectives as an area with state laws that need to be complied with, any information pertaining to the existence, location, or regulations of the recently established Marine Protected Areas—the Morro Bay State Marine Conservation Area and the Morro Bay State Marine Reserve—is missing entirely from the DEIR. Further, as identified in the Notice of Preparation, "the DEIR must examine short and long term pollution issues as they relate to the Marine Life Protection Act. An analysis of the probability, magnitude, and effects of spills from various components of the wastewater system will be important, especially if the analysis shows substantial differences in potential impacts from different collection systems types, treatment technologies, or treatment plant and other system component locations. This work must be correlated with the analysis of the health and safety implications of various project alternatives." [ii] Such an analysis is not included in the DEIR. Given that these protected areas are located in the bay adjacent to the project area, these areas would be impacted by any of the project alternatives pursued.

P36-2

Specifically, these protected areas have regulations restricting "take" of marine life, which is not limited to fishing activities. The California Department of Fish and Game has stated that Marine Reserves "shall be maintained to the extent practicable in an undisturbed and unpolluted state," and that "Take is not limited to fishing activities….The high level of protection created by an SMR [State Marine Reserve] is based on the assumption that no other appreciable level of take or alteration of the ecosystem is allowed (e.g. sewage discharge)." [iii]

P36-3

Spills and SMR Concerns

Because of the high level of protection afforded to a State Marine Reserve ("SMR"), we request that sewage spills to the SMR be evaluated within Appendix F – 5.4.4 Thresholds of Significance, in accordance with CEQA and the regulations stated in the California Department of Fish and Game's *Master Plan for Marine Protected Areas* dated April 13, 2007 (p. 52), that within the new designation, "Take is not limited to fishing activities…. The high level of protection created by an SMR is based on the assumption that no other appreciable level of take or alteration of the ecosystem is allowed (e.g., sewage discharge…)." Prevention of sewage spills and unregulated discharges that would degrade coastal water quality or harm marine resources is consistent with Sections 30230 and 30231 of the Coastal Act, as well as Section 2852(d) of the California Fish and Game Code.

P36-4

We note that STEP collection systems may have a lesser likelihood of spills because greases settle out in tanks and therefore prevent spills such as that which happened in Pismo Beach January 7, 2009, where a grease-clogged sewer line caused from 500 to 1,000 gallons of raw sewage to spill flowing out of a manhole and into the city's storm drains which empty onto the beach.[iv]

We observe the benefit of STEP technology for its reduced significance of I/I when compared with gravity technology. As Dan Berman, Director of the MBNEP, shared at a

meeting with the County and environmental groups December 19, 2008, the *LOWWP DEIR* statement that I/I from a gravity system does not pose a significant potential environmental impact does not reflect that a primary factor in the January 27, 2008 California Men's Colony Wastewater Treatment Plant spill was attributed to I/I.[v]

In relation to the evaluation of spills into the State Marine Reserve, the DEIR Section 5.7 Public Health and Safety and Appendix I Hazardous Material Release Response must provide risk analysis to the SMR should spills, which could then be used to inform the County's economic analysis to factor in potential fines Los Osos homeowners would bear should a spill into the SMR occur via pump station malfunction, I/I issues, earthquakes, etc.

P36-4 CONT

Co-Equal Analysis of Collection System Alternatives

The Comparison of Collection System Alternatives in Table 7-5 and the DEIR throughout incorrectly characterizes issues associated with a STEP/STEG collection system. Namely, the impacts attributed to STEP/STEG—such as the degree of soil disruption, the requirement of permanent public easements, and the relative impacts on cultural resources—are not accurate. Additionally, there are physical aspects of STEP/STEG that are incorrectly identified as part of the STEP/STEG system. These assertions are supported by text below, findings in the 2001 Final Environmental Impact Report[vi], and in Attachment II: *Statement of Key Environmental Issues, Los Osos Wastewater Treatment Project Collection System*. If these issues are correctly characterized, it becomes clear that STEP/STEG is the environmentally preferable collection system.

<u>Soil Disruption/Cost</u>

The significance of on-lot impacts from STEP must be compared to the significance of trenching streets for 47 miles for gravity.

STEP tanks require soil displacement approximately 8'W x 14'L x 8'D (approximately 23 cubic yards) to accommodate the 1,500 gallon tank measuring 6'W x 11'L x 6.25'D.[vii] To reduce disturbance of personal property in the case of a STEP collection system, boring (as opposed to trenching) can be used to connect the lateral pipe to the STEP tank. There is very little road/traffic disturbance for boring the 4-inch diameter opening for inserting STEP pipe in roads, and it can be laid within 12-18 months. Boring avoids the significant impacts and mitigations associated with excavation, runoff pollution, and dewatering open trenches in high groundwater areas (e.g., disposing of the polluted water).

P36-5

To further reduce soil disturbance, with 75% of the septic systems in front yards, STEP tanks can go where septic tanks are now with site enlargement. As described on page 3-59 of the DEIR, it is possible to locate new STEP/STEG tanks in the same location as existing septic tanks by removing the existing septic tank and hauling it to a landfill. This would minimize soil displacement in instances where the existing septic would have to be removed. STEP tanks are approximately 50% larger than the preexisting septic tanks.[viii]

Additionally, it may be possible to place STEP/STEG tanks in the eighty foot wide Right-of-Ways (ROWs), which may be an alternative for small lots or lots with septic tanks currently located in the backyard. STEP/STEG tanks placed in the ROW could be located near driveways to further reduce interference with traffic caused by parked pumping service vehicles. Lastly, it is possible to cluster STEP/STEG tanks so that four to ten homes are on one pump tank, each with individual STEP tanks to improve the economics of sewering.[ix]

For gravity, pipes will be laid 7'-9' deep in 63% of the roads, 10'-14' deep in 34% of the roads, 14'-18' deep in 2% of the roads and 18'-23' deep in 1% of the roads.[x] It is estimated that the width of the 7'-8' feet deep trenches will be a minimum of 6 feet for the

trenches spanning 45+ miles.[xi] A gravity collection system will also require disturbance of personal property in the form of trenching the lateral connection to the house and the decommissioning of the septic tanks.

There will be additional gravity collection soil disturbance for building 12 Pocket pump stations (10'L x 10'W x 10'D), 6 Duplex pump stations (10'L x 10'W x 10'D), and 2 Triplex pump stations (12'L x 12'W x 12'D). Additionally, Duplex and Triplex stations require a standby power station that will also add to soil disturbance.[xii]

Open trenching requires shoring, restabalizing soils, and reconstructing streets for the 45+ miles of trenching as well as for the 20 pump stations. Unlike STEP, the soils removed are hauled away and new material brought in that can be compacted and stabilized to allow maintenance of the required pipe grades. The trenches must be dug deeper than the actual pipe level to allow room for the new compactable material. P36-5 CONT

Conventional gravity trenching will greatly impact roads/traffic for a minimum estimated time of two years.[xiii] The reduced time to bore for STEP pipe means lower construction costs and fewer impacts to roads and traffic and greater project expediency. Based on the similarity of width and depth, the calculations of mileage length required to install 5,000 STEP tanks (compared to the 45+ miles of gravity pipe trenching) is less than 14 miles and is only 7 miles if STEP tanks are placed where the septic tanks are now.[xiv]

We disagree with the LOWWP DEIR findings that soil disturbance is nearly equivalent for these two technologies and request a reevaluation of the soil disturbance impacts.

I/I and Exfiltration

We disagree with the DEIR assessment that there is no substantial difference between STEP and gravity in the potential environmental impacts from Inflow/Infiltration (I/I) and Exfiltration, especially since Ron Crites and George Tchobanoglous state, "One of the major problems with conventional gravity sewers is the infiltration of extraneous flow during periods of high ground water, and the exfiltration during dry weather periods." [xv]

The DEIR and *Fine Screening Analysis* estimates the average wet weather flow for a LOWWP conventional gravity system will be 200,000 gallons/day more than for a STEP system due to I/I. The LOWWP Technical Memorandum "Loads and Flows" estimates a gravity system's peak storm flows will be 800,000 gallons/day more than STEP (2.5 million gallons/day versus 1.7 million gallons/day).[xvi] Additionally, George Tchobanoglous states in the *Update on Release of Draft Fine Screening Report* states, P36-6

> While gravity sewers may be more watertight initially when installed, appropriate allowances should be made for anticipated infiltration rates. Assuming excellent construction and installation techniques, it is anticipated that the minimum infiltration rate in a conventional gravity collection system would be somewhere between 0.5 to 1 Mgal/d during wet weather. Corresponding peaking factors would be on the order of 1.25 to 1.5 (assuming excellent construction). Therefore, the average wet weather flow is estimated to range from 1.7 to 2.2 Mgal/d; the corresponding peak wet weather flow would range from 1.9 to 2.6 Mgal/d, based on a wet weather peaking factor of 1.4 (a conservative value).[xvii]

Biosolids

Per Project Description 3-64 and the findings that there are no significant impacts from biosolids from either system, we request further analysis of the benefits of STEP tank pretreatment and biosolids reduction by 75%.[xviii]

As noted by the NWRI Final Report of the Independent Advisory Panel on Reviewing the Los Osos Wastewater Management Plan Update, December 4, 2006, Dr. George Tchobanoglous, Chair: "3.2.7 The economic benefits of septic tank pretreatment should be considered in the cost estimates for alternative treatment technologies. Such an analysis should also include the economic benefit of reduced biosolids production." P36-7

Cultural Resources

Four types of cultural resources are defined, with analysis covering Historic Resources (buildings and structures), Archaeological Resources (prehistoric and historic archaeological sites), Paleontological Resources or Geological Feature (unique paleontological or geologic resource), and Human Remains (Native American burials) (p. 5.6-7). Gravity collection systems must maintain downhill slopes at all times and pump stations are needed for low areas where downhill slopes cannot be maintained; STEP/STEG pipe follows the topography.[xix] STEP/STEG pipes can be laid using directional boring, which would facilitate avoidance of buried cultural resources (as further elaborated in the KEIS, Section 3, pp.7-8); this same technique is infeasible for laying gravity collection pipe. Therefore, this section should reevaluate each system's impacts on cultural resources based on both on- and off-lot activities. Page 5.6-13 also incorrectly associates gravity grinder pumps and pump stations with STEP/STEG collection; therefore, the impacts to cultural resources associated with that should be stricken. P36-8

2001 Final Environmental Impact Report

The 2001 FEIR identified STEP/STEG as the environmentally superior alternative for collection systems.

Venting

Despite the fact that both STEP/STEG and gravity systems require venting, it appears that venting of GHG is only attributed to STEP/STEG, according to revised tables 5.9-14 and 5.9-15. P36-9

Seawater Intrusion

We request that the two treatment technologies, STEP/STEG and gravity, be analyzed based on which one is most compatible with aggressive water conservation measures enabling a reduced draw on the aquifer and further remediation of sea water intrusion. Within this context, we request that your analysis take the following statement by Ronald Crites and Dr. Tchobanoglous into consideration:

> Although the use of conventional gravity-flow sewers for the collection of wastewater continues to be the accepted norm for sewerage practice in the United States, alternative collection systems…are becoming increasingly popular. In some areas the use of conventional gravity sewers is becoming counterproductive because the use of water conservation devices continues to increase. The minimum flows required for gravity-flow sewers to operate make them problematic where development occurs slowly in a large development or where water conservation reduces the wastewater flows

P36-10

> significantly. In many cases, the water used to flush conventional gravity-flow collection systems for the removal of accumulated solids far exceeds the water saved through water conservation measures.[xx]

P36-10 CONT

Decentralized Option

Unlike gravity, STEP/STEG collection systems are compatible with decentralized treatment, which is therefore more flexible considering uncertainties about future (i.e. impacts of climate change). Ronald Crites and George Tchobanoglous observe,

> As the expense of conventional centralized wastewater management systems continues to increase, and the availability of water supply sources decreases, the role of decentralized systems in wastewater management will become more important. Given the fact that one day, in the not-so distant future, conventional gravity sewers will become obsolete, movement away from the concept and reality of large regional centralized facilities to the acceptance of decentralized wastewater management systems represents a step into the future.[xxi]

P36-11

Pump and Pocket Pump Stations for gravity collection

A full analysis of the conventional gravity collection system's pump and pocket pump stations is absolutely necessary. This analysis should include:

- Potential impacts to the State Marine Reserve, especially since 8 pocket pump and 3 pump stations are proposed at the edge of the State Marine Reserve
- Potential impacts to cultural resources. These stations are located in "High Sensitivity Archaeological Sensitive Areas" (Table 5.6-1).
- Appropriateness of location in light of climate change and sea level rise, which is conservatively estimated at a sea level rise between 8 inches to two feet by 2050.[xxii] This will only be 35 years into the LOWWP's lifespan. The California Coast Commission further states that the rule of thumb is 1' of sea rise will cause 50' to 100' beach loss, increased salt water intrusion into coastal aquifers and the saltwater/freshwater interface and zone of brackish water will migrate inland.[xxiii]
- An evaluation of how the pump stations would fare in the event of a tsunami or seiche (--such risk is identified in the DEIR on p.5.3-61).
- The potential impacts, such as a sewage spill, which may result due to pump failure, given that the eight pocket pumps are proposed without a backup power source in the event of a power failure.[xxiv]
- The demands of dewatering and potential construction contaminates that might impact coastal water quality.
- Energy consumption[xxv]
- I/I and Exfiltration at the pump and pocket pump stations

Additionally, it should be noted that the descriptive text throughout the DEIR is inconsistent with the maps. The maps show 8 major gravity pump stations; the text describes 7.[xxvi] Due to this oversight, other calculations may need to be reworked. Acknowledging these issues associated with pump and pocket pump stations and that they are unaddressed by the DEIR implies that the pump stations could have significant impacts that were not studied or addressed.

I/I (Inflow/Infiltration) and Exfiltration:

With the treatment plant sized at 1.2 mgd, preventative measures need to be taken against spills during wet weather flows which could be as high as 2.6 mgd. Low Impact Development Strategies such as stormwater management are essential to prevent I/I and simultaneously recharge groundwater. Additionally, as stated in Appendix B – 3.4, "Exfiltration and I/I occur in all types of collections systems and can be minimized by:

- Utilizing high quality pressure rated PVC pipe (waterline pipe) for both mainlines and house laterals
- Utilizing butt-fusion welded HDPE, especially where pipe must be placed in the seasonally high groundwater table.
- Utilizing pre-cast manhole bases with cast-in-place gaskets
- Installing manhole inflow dishes/protectors (Cretex, Pollardwater, etc.) below the manhole ring and cover to prevent the entry of surface water
- Utilizing external joint seals (Infi-Shield) where manholes segments are joined in addition to traditional "mastic" joint sealant
- Replacing all septic tanks and insuring all appurtenances are sealed"

If a gravity system is employed, it is vital that the above-mentioned technology is used to minimize potentially significant impacts that could otherwise result. (See Cost and Economic Sustainability section of this document where these issues are further addressed).

P36-12

Climate Change and Sea Level Rise:

Future sea level rise could cause additional I/I and exfiltration issues that need to be considered within the DEIR including the effects of saltwater I/I. Saltwater I/I impacts to a wastewater treatment and collection system should be evaluated for both gravity and STEP/STEG technologies because:

- Conservative global warming predictions estimate sea level rise to be between 8 inches to two feet by 2050.[xxvii] This will only be 35 years into the LOWWP's lifespan. It has also been predicted that the rise in tides will bring larger coastal storm events.
- The U.S. Geological Survey's New Report on Sea Level Rise from Global Warming estimates that in light of recent ice sheet melting, global sea levels could rise as much as 4 feet by 2100.[xxviii]
- The California Coastal Commission has stated that implications from sea level rise will include increased salt water intrusion to coastal aquifers; saltwater/freshwater interface & zone of brackish water will migrate inland; and, as a rule of thumb is that 1' of rise will cause about a 50' to 100' beach loss. They add, "[P]rojects should examine higher high water and extreme high water, rather than mean sea level. Mean sea level is not the only, or maybe even the correct, water level statistic for coastal engineers and planners to consider." [xxix]

P36-13

To adequately identify and subsequently mitigate for significant impacts, the DEIR must include a climate change impact analysis, including a discussion of the potential impacts on the proposed project related to sea level rises. Governor Schwarzenegger signed Executive Order S-13-80 into effect on November 14, 2008 requiring project planning to account for the impacts of climate change and recognizing the particular threat sea level rises pose for coastal communities (see http://gov.co.gov/executive-order/11036/). This requires public projects after that date to include climate change planning, and it recommends that projects in the

works also prepare those plans. The Intergovernmental Panel on Climate Change and the State of California (e.g.,, Department of Water Resources California Water Plan) report that the potential for seawater intrusion in coastal aquifers will increase with sea level rises.

P36-13 CONT

Water Conservation

We are concerned that the ability to handle the total effluent relies on the successful implementation of a water conservation program as per DEIR Table 2.8 that will conserve 160 AFY. If this is not conserved effectively, there will be effluent in excess of what is designed to be managed. Since the amount of water that will effectively be conserved is an unknown, the project should be designed to handle a range of water uses, including if no conservation is achieved or if water use actually increases. This range would include capacity for water should the conservation targets be met on the low end, and buildout at inflated water usage rates on the high end. If the project is not designed to handle a range of water inputs, the plant could experience issues with exceedance of capacity which could have dire impacts on the surrounding environments. Ironically, the effective implementation of water conservation measures would require concerted action with the water purveyors, which seems to be a primary reason urban and ag reuse alternatives were designated Level C alternatives.

At the same time, the 12% water conservation target does not seem aggressive enough. The December 2008 California Chronicle reports California Assembly Bill 49 will reduce urban per capita water use 20% by 2020. The LOWWP should seek to achieve this 20% goal. We refer you to the DEIR Comments being submitted by SLO Green Build regarding water conservation strategies and to the Central Coast Low Impact Development Center regarding Low Impact Development strategies for aggressive water conservation measures. While we encourage aggressive water conservation measures to supplement ag reuse, we note that gravity technologies can be counterproductive to water conservation measures as described by Ronald Crites and George Tchobanoglous: "The minimum flows required for gravity-flow sewers to operate make them problematic where…water conservation reduces the wastewater flows significantly. In many cases, the water used to flush conventional gravity-flow collection systems for the removal of accumulated solids far exceeds the water saved through water conservation measures.[xxx]

P36-14

Tertiary Treatment

To protect public health and promote a wide range of beneficial reuse options given the effluent disposal options considered in the DEIR (consistent with project Objective 3d[xxxi] and the advice of Carollo Engineers[xxxii]), Surfrider finds that effluent should be treated to tertiary standards. We concur with the NWRI Panel that effluent returned to Broderson should have tertiary treatment and that even if it is legal to define the site as disposal, the intent is to replenish the aquifer and mitigate seawater intrusion and thus it must be evaluated as a recharge project for public safety. As the NWRI Panel recommends, we concur: Broderson must be reviewed by the California Department of Public Health; it is too risky to the town's potable water supply otherwise.[xxxiii] Further, one of the project objectives is to alleviate groundwater contamination (p. 2-6), so it seems compelling to ensure that the effluent disposal will, in fact, alleviate groundwater contamination and not add to it.

P36-15

Failure to treat tertiary water also results in unnecessary waste. Secondary effluent disposed of at the Tonini site via sprayfield requires that the site must be fenced off and the grass must be continuously harvested and dumped offsite (contributing unnecessarily to increased emissions, disposal costs, and fencing costs). Additionally, as previously

mentioned, the Tonini site does not promote groundwater recharge. Disposing of the effluent in a manner that does not seek to maximize reuse is essentially exporting both the water and energy imbedded in the treated effluent. Arguably, the energy expended to treat wastewater to tertiary standards is itself reclaimed when the water is reclaimed for beneficial reuse. If the project alternatives are revised to require tertiary treatment, which we feel they must, the energy use associated with the additional step of treatment should account for the imbedded energy in the reclaimed water.

P36-15 CONT

Wastewater Reuse

Treating the effluent to tertiary would broaden the reuse options for the effluent, thus improving possibilities for groundwater recharge and seawater intrusion remediation. Urban and agricultural ("AG") reuse sites all have mitigating factors ranging between 0.1 and 0.55 attributed to them, which would vastly improve groundwater recharge. If all project alternatives include tertiary treatment, urban reuse could be considered a Level A alternative, since these sites could connect to the conveyance pipeline to Broderson. An additional benefit to treating effluent to tertiary with the intent to reuse it is that it can be sold for profit, which could offset costs associated with the higher level of treatment. The reuse element may also help attract funding to the project.

To adapt to the seasonality of reuse (mentioned on p. 7-64 as a reason ag reuse was designated a Level B alternative), the same 46 AF storage pond that was suggested to compliment the seasonality of the Tonini sprayfields (p. 7-63) could be used to store treated effluent during the winter months. Since the storage pond would have to be built with either alternative, it seems inappropriate that ag reuse was downgraded to Level B based on the necessity of storage ponds. From Table 7-8, it is unclear why the ag reuse alternatives would require significantly larger storage ponds than the sprayfields require, given that all three alternatives (designated 2a-2c in Table 7-8) have the same total effluent disposal capacity.

P36-16

AB 2701, the state law that allowed the transfer of responsibility for system design and construction from the bankrupt Los Osos CSD to the County, states that the County's efforts to construct and operate a wastewater treatment system, "may include programs and projects for recharging aquifers, preventing saltwater intrusion, and managing groundwater resources to the extent that they are related to the construction and operation of the community wastewater collection and treatment system." (Government Code, Section 25825.5 c). If the project alleviates the nitrate pollution problem but the aquifer is lost to saltwater intrusion, nothing is gained.[xxxiv] The environmentally superior alternative should include measures to offset pumping from the lower aquifer and *maximize* recharge of the upper aquifer.

Agricultural Reuse

The Agricultural ("Ag") Reuse effluent disposal alternative should be evaluated as a Level A alternative. We refute the 20 year timeframe to get ag reuse up and running.[xxxv] Monterey County, for instance, has an effective ag reuse program in place (the Castroville Seawater Intrusion Project) and water scarcity is such that farmers most likely will find treated effluent a benefit. If farmers are faced with importing water for crops because of insufficient groundwater, the costs of using tertiary treated effluent are likely to be significantly less than the costs of importing water. We are submitting the Ripley Pacific Team Los Osos Wastewater Management Plan Update Technical Memorandum #7 (Attachment III) which shows the previous and positive footwork towards agricultural reuse.

P36-17

Another benefit of ag reuse is that treated effluent disposed on land requires denitrification; this could be eliminated if the effluent was disposed through agricultural reuse. Consequently, this could also reduce the use of nitrogen fertilizers on crops. Of course the greatest benefits of ag reuse would be offset groundwater pumping, reduced seawater intrusion, and groundwater recharge. This type of scenario, we believe, represents a truly integrated approach to managing water resources. P36-17 CONT

Groundwater Recharge

The LOWWP DEIR states, "The wastewater project will maintain the widest possible options for beneficial reuse of treated effluent." We do not believe the explorations to date have gone far enough to adequately address groundwater recharge and seawater intrusion mitigation. We request analysis of the implementation of Low Impact Development Strategies which could be simultaneously constructed with the LOWWP (i.e. while pipes are already being laid) and facilitate the protection of the aquifer from further sea water intrusion addressed in Appendix D – 5.2.2.3. The DEIR does not quantify the current contribution of septics to groundwater recharge, so it is impossible to determine which alternatives would sufficiently offset the volume of recharge once the septics are removed or decommissioned. To avoid impact caused by insufficient replacement of groundwater recharge, it is reasonable to require the implementation of additional recharge alternatives, such as urban reuse, ag reuse, and LID strategies. P36-18

To bridge that gap, we request extensive analysis and application of Low Impact Development (LID) strategies.[xxxvi] Additional groundwater recharge and seawater intrusion mitigation could be achieved through the simultaneous implementation of LID strategies such as the Green Streets program highlighted by the Central Coast LID Center. [xxxvii] Such a project can take advantage of construction that will be taking place in the street right-of-way to implement techniques to manage stormwater runoff and recharge the groundwater basin. Stormwater infrastructure grants might also be able to leverage the cost of the LOWWP facility. Similar work was done in Seattle and we recommend the DEIR evaluate their approach to street impacts, tending to stormwater issues in conjunction with laying wastewater pipes.

Broderson Leachfields

We are concerned about the projects' reliance on the Broderson site's estimated capacity to accommodate 400,000 gallons per day. Broderson has not been tested with treated effluent being leached at the rate of 400,000 gallons/day, so relying on this site to absorb this volume of effluent could result in excess ponding and surface runoff of effluent. This is especially troubling given that the effluent is proposed to receive only secondary treatment. Not having a backup plan for effluent disposal should the site's capacity not be as great as what has been estimated could result in significant impacts to surface water quality and public health and safety. P36-19

Tonini Spray Fields

We disagree with the identification of the Tonini site as the environmentally superior effluent disposal site, for the reasons enumerated below: P36-20

Distance
Tonini is the site located the furthest from Los Osos, which would require more pipe to be laid (impacting costs and soil disturbance).

Costs
The substantial acreage that would be purchased far exceeds the needs of a treatment plant and places additional financial burden on the community in Los Osos.[xxxviii]

Recharge Opportunities
The Tonini site provides no opportunity for groundwater recharge and this method of disposal in no way assists Los Osos' Level III water severity designation. There are other effluent disposal sites that would contribute to groundwater recharge, as well as opportunities for urban and ag reuse to offset groundwater pumping. P36-20 CONT

Agricultural Operations
Tonini is the only site that is located on prime agricultural land under a Williamson Act contract. Despite the fact that Project 4 only requires conversion of one agricultural parcel, the amount of land to be converted (248 acres) and the agricultural quality of the land to be converted are greater than the parcels of Projects 1-3. As such, the Tonini site does not meet criteria established in Table 7-3 which states that the project should demonstrate that there is no other feasible alternative for facilities located within ESHA areas or on Prime agricultural land.

We request that the effluent disposal sites be reevaluated based on the criteria established on page 2-14 and in Table 7-3.

Alternative energy

If the sprayfields must be utilized prior to bringing on an agriculture reuse program, opportunities for using crops harvested at Tonini for biofuel generation should be evaluated. As stated by Jonathan Todd, President of John Todd Ecological Design, regarding this issue, "It is our goal that by 2015 wastewater treatment plants become a net energy exporter. The opportunity in Los Osos is to pilot some high sugar or high oil yielding plants to be converted to clean fuels…. Clean fuels, fiber and fodder crops should all be able to take advantage of the water and residual nutrients coming from whatever system is installed in Los Osos. To grow grass and take it to the dump is throwing away all of the embodied energy in our wastewater/ food chain; I think it is a missed possibility." [xxxix] P36-21

Furthermore, we request Appendix B – 5.1.5 reevaluate Algae Removal and investigate the opportunity to use the algae as biofuel. Algae is a higher biofuel source than corn and can be harvested as an asset. The project team may consider consultation with Jonathan Todd as well as Rob Miller, Principle Engineer, Wallace Group to assist the analysis of algae as a benefit.

Liquefaction

A geotechnical report that addresses liquefaction hazards should be prepared and included in the EIR prior to project approval. Without such an analysis, it is unclear whether specific alternatives are able to mitigate potential impacts to "less than significant". The Broderson site, six gravity pump stations, and all twelve gravity pocket pump stations are in "very high potential" liquefaction zones (shown in Exhibit 5.4-1), as are the STEP tanks and P36-22

nearly all collection system piping be it small fused effluent-only STEP/STEG pipe or the deep-trenched, large bell and spigot gravity pipe which include manholes and carries effluent and biosolids to a treatment facility.[xl] Such an analysis should consider impacts on the State Marine Reserve in the event of a spill. P36-22 CONT

The 2003 San Simeon Earthquake, for instance, one with an epicenter 25 miles away, created evidence of liquefaction along the shorelines of Morro Bay and Cuesta Inlet. [xli]

Seismic Hazards

We request that the DEIR include information about the impact of the 2003 6.5 San Simeon Earthquake on the Oceano Wastewater Treatment facility which is 40+ miles from the earthquake's epicenter and underwent damage. Unlike the San Simeon earthquake with its epicenter 25 miles from Los Osos, the Los Osos Fault is 0.6 miles from the LOWWP and has the potential of a 7.0 magnitude earthquake. Based on the potential of a large earthquake, which of the two collection technologies being evaluated could best withstand a large local earthquake? P36-23

Furthermore, a new fault was recently discovered and needs to be considered in the DEIR because it is closer than the Hosgri Fault (See DEIR Table 5.4-1). In the Telegram Tribune article, "Earthquake fault discovered offshore of Diablo Canyon nuclear power plant", it is described as a vertical strike-slip fault having the potential of a 6.5 magnitude earthquake and is less than a mile offshore.[xlii]

Cost and Economic Sustainability

The project's economic sustainability is integral with balanced metrics, the triple-bottom line, of Environmental, Social, and Economic Sustainability. The LOWWP collection system should be as affordable as possible to promote its sustainability. Ultimately, a project's environmental sustainability is tied to its social and economic sustainability. Although costs are not explicitly investigated or dealt with in detail in the CEQA process, we feel that the cost estimates provided may not reflect accurate estimates. To this end, we offer the following comments:

We recommend that sewer laterals for both gravity or STEP/STEG that connect the sewer to the houses be included in the cost of the sewer assessment. It is unfair to burden homeowners with additional up front costs in order to be hooked up to the sewer and not subject to RWQCB fines. As stated in the DEIR, the LOWWP exceeds EPA guidelines in cost to the homeowners and we highly recommend that all costs directly tied to the construction of the project be held within the assessment.[xliii] P36-24

Cost estimates should include:

- A gravity collection system should reflect the cost of fuse welding in high groundwater areas taking into account sea level rise projections for areas that will be impacted by an 8 inches to 2 feet sea level rise prediction within the lifespan of the LOWWP.[xliv]
- A gravity collection system should reflect the cost of boring gravity pipe when Chumash Archaeological Sites are encountered. Since these encounters are unknown, the cost estimate should be reflected as a range of costs.
- Road repair issues from deep trenching as well as the expense related to excavation when leaks are found at bell and spigot joints, which are associated with a gravity collection system.

- The features outlined in Appendix B-3.4 which can minimize the risks of I/I and Exfiltration. P36-24 CONT

Greenhouse Gas Emissions

Per DEIR Appendix B – 5.1.4.2 (Denitrification) we direct you to the KEIS once more. There are environmentally superior alternatives to methanol for denitrification that we request that you analyze. Micro C, for instance, is derived from renewable agricultural products that are abundant in the United States while methanol (the current industry standard) is derived from non-renewable natural gas.[xlv] Furthermore, with an Agricultural Exchange/Reuse program, denitrification may be unnecessary because the treated water containing nitrates could be used on selected crops eliminating the need for nitrate fertilizers. P36-25

Odors

The DEIR analysis suggests that odors associated with gravity and STEP/STEG collections systems are relatively equivalent. However, STEP/STEG odors could be further minimized per a suggestion from Ronald Crites and George Tchobanoglous in relation to STEP: "Some of the earlier STEP system designs failed to account for hydrogen sulfide generation and the release of odors. To overcome the potential for odor release at air release valves, activated carbon cartridges are often installed in valve boxes. At the end of a STEP system special features for odor control such as aeration, scrubbing, or soil or compost filtration can be used." [xlvi] P36-26

Recreation

The DEIR asserts that there will not be any adverse impacts from the project on recreation because "the proposed project does not include recreational facilities or require the construction or expansion of recreational facilities"(p. 8-3). The DEIR does not consider impacts to existing recreation within or adjacent to the project area, such as hiking, biking, kayaking, swimming, wading, kayaking, small boat sailing or otherwise, and thus fails to adequately analyze impacts on recreation due to construction or project operation and maintenance. P36-27

The effluent disposal capacities given for all land-based disposal sites in the DEIR are estimates. Given that the figures are estimates, project alternatives must have ample capacity to accommodate effluent in the event that the actual capacities of the sites are lesser than the estimates given. Failure to do so poses a significant risk to surface water quality and public health and safety.

ESHA/Wetlands

It is unclear whether the County identified wetlands as defined in the Coastal Act, but it appears that the County used the federal definition (p. 5.5-3). It is important that the DEIR use this definition as opposed to the federal definition because the Coastal Commission's interpretation is more stringent. Given that the federal definition appears to have been used instead of the state definition, proposed mitigation is likely insufficient. Presumably, this would apply across all project alternatives.[xlvii] Additionally, proposed mitigation for impacts to ESHA that rely on the preservation of ESHA elsewhere (i.e. Compensatory mitigation 5.5- P36-28

A15) is not consistent with the Coastal Act and would thus constitute a significant impact (*Bolsa Chica Land Trust v. Superior Court, 71 Cal. App. 4th 493 (1999)).*

P36-28
CONT

The Surfrider Foundation, San Luis Bay Chapter appreciates the opportunity to provide comment on the DEIR, as well as the County's commitment to consider thoroughly the final proposed project's potential environmental impacts and public comments before completing and certifying the Final EIR. If significant new information is added to the EIR in response to public comments, which we believe will be the case given the substantive information we have presented, we would urge the County to recirculate a revised draft EIR prior to certification, pursuant to *CEQA Guidelines* § 15088.5(a)(1); § 15088.5(a)(2); and § 15088.5(a)(3). We hope that the County will accept and respond to our comments in earnest.

Sincerely,

Jeff Pienak, Chair
Surfrider Foundation,
San Luis Bay Chapter

Submitted by the San Luis Bay Chapter of the Surfrider Foundation

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Surfrider Foundation is a non-profit environmental organization dedicated to the protection and enjoyment of the world's waves, oceans, and beaches for all people, through conservation, activism, research and education.

Attachment I:

Surfrider Foundation®

San Luis Bay Chapter

January 9, 2008

Attn: Mark Hutchinson
SLO County Public Works Dept
County Gov't Center, Rm 207
San Luis Obispo, CA 93408

Surfrider Foundation
San Luis Bay Chapter
PO Box 13222
San Luis Obispo, CA 93406

Subject: Scoping Comments for Los Osos Wastewater Treatment Project EIR

Based on the San Luis Bay Chapter of Surfrider Foundation's Key Environmental Issues Statement (Attachment A) that enumerates key issues for evaluation for a future Los Osos wastewater project, the Chapter submits the following as public comment on the Notice of Preparation of a Draft Environmental Impact Report for the County of San Luis Obispo's Los Osos Wastewater Project.

On page 13 of the NOP, the County describes the approach it will take to develop and ultimately choose a project alternative. While we support the County's efforts to evaluate project alternatives through the environmental review process, we expect that this will be a challenging endeavor; we encourage the County to work at a deliberate pace, carefully evaluating each alternative and its associated environmental issues individually, and suggest that the County should devise a clear process and establish clear criteria for comparing and short-listing these possibly very different project alternatives.

In regards to the project description and supporting appendices, it seems the County has captured the relevant appendix topics; we are especially excited to see the inclusion of on-site based alternatives, such as composting toilets, grey water systems and other water supply alternatives. We find that the water supply alternatives are a key of consideration for the wastewater project, especially given the findings relating to the contamination of the Los Osos groundwater basin and the proximity of the project area to established Marine Protected Areas (MPAs).

The scope of the impact areas spans a host of issues; however, a couple of compelling areas of interest have been omitted from the Notice of Preparation and one identified area of interest needs further development as outlined in the following text. In the area of water quality (p.18), both the short term and long term water quality issues should analyze impacts to surface waters—including fresh water and marine—and also surface water runoff, in addition

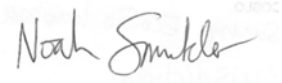
to groundwater. The DEIR should analyze water quality benefits in addition to water quality impairments, although we caution against justifying associated water quality impairments with associated water quality benefits.

Areas of interest that have been omitted from the impact areas listed on pp. 18-22 include recreation and coastal access. Coastal-dependent recreation and public access within the coastal zone are compelling areas to include in the impact analysis, as they are both protected by the California Coastal Act in Sections 30220, 30221, 30223, and 30230; as well as Sections 30210, 30211, and 30212, respectively. Since this project will have to be analyzed and permitted by the California Coastal Commission, it would be prudent to include detailed analysis of these two impact areas in the project EIR. Recreational activities that could be impacted or enhanced by the wastewater project include, but are not limited to kayaking, fishing, bird watching, hiking, biking, sailing, swimming and surfing.

Lastly, we would like to add emphasis to the importance of accurate mapping of environmentally sensitive habitat area (ESHA) and wetlands as defined by the Coastal Act in your analysis of biological impacts. The Coastal Act has stringent policies regarding development in both habitat areas, so starting with a clear and accurate map of these areas will be essential to best site the wastewater project and appropriately mitigate for habitat impacts. Additionally, we would like to include a reference to *Bolsa Chica Land Trust v. Superior Court, 71 Cal. App. 4th 493 (1999)* to further inform siting considerations. The holding in *Bolsa Chica* states that Coastal Act section 30240 does not permit non-resource dependent development in an environmentally sensitive area ("ESHA"), regardless of off-site mitigation of impacts.

Thank you for your efforts and the opportunity to provide comment on the scope of this project.

Sincerely,



Noah Smukler

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Surfrider Foundation is a non-profit environmental organization dedicated to the protection and enjoyment of the world's waves, oceans, and beaches for all people, via conservation, activism, research & education.

ATTACHMENT A

San Luis Bay Chapter

Statement of Key Environmental Issues:
Los Osos Wastewater Treatment Project 7/17/07

The mission of the San Luis Bay (SLB) Chapter of the Surfrider Foundation is to preserve, enhance, and protect the biological health of our coastal environment and its contributing watersheds. The complex water supply and treatment challenges of the Central Coast require creative solutions, and specifically, the Los Osos Wastewater Treatment Project is an opportunity to implement best available sustainable water management and sewage treatment techniques.

SLB Surfrider appreciates SLO County Staff's bottom line goal of developing the "most cost effective, sustainable, environmentally preferred project" and we submit the following Statement of Key Environmental Issues into the public record:

1. Sustainable water management – practices involving tertiary treatment including water recycling through reclamation, water polishing, and recycling capacities with minimal reliance on chemical inputs during treatment to reduce the impacts of the project on the Morro Bay State Marine Reserve and extended marine ecosystem. We support high-level seawater intrusion (SWI) mitigation measures, reduced pumping of the lower aquifer, and the overall goal of a balanced ground water basin.

   The project should promote community self-sufficiency, therefore, we recommend an incentive based conservation program with appropriate building code adjustments to encourage the implementation of certified and effective "Appropriate Technologies" such as greywater systems, dual flush and composting toilets, dual plumbing requirements, rainwater catchment, cisterns, pervious concrete, etc., and a demand based rate structure to reach the goal of a balanced ground water basin.

2. Water Monitoring – to develop and implement a strong wastewater, ambient water, emerging contaminants, and biosolids quality-monitoring program, and to maintain clear information and tracking of data to assist water quality enhancement. We promote the inclusion of an educational component partnering with local schools, community groups, and non-profits.

3. Affordability – regional co-operation amongst neighboring communities would enhance grant-funding opportunities and maximize physical, technical and fiscal resources.

4. Energy use & long term affordability – to minimize dependency on non-renewable energy sources through the use of smart design, cogeneration of energy, and other renewable energy sources. For example, a certified sewage sludge composting operation has the potential to reduce the overall volume and toxicity of the resulting biosolids, thereby increasing their quality and thus reducing the community's hauling costs, associated air quality impacts, and vehicular traffic. We promote use of the precautionary principle and

do not support the land application of these biosolids within the Morro Bay Estuary watershed. We promote consideration of a ponding system, STEP/STEG and Decentralized options because of their ability to reduce handling of sludge.

5. Green design and building techniques – we support a project that qualifies for the U.S. Green Building Council's "Leadership in Energy & Environmental Design" (LEED) certification and incorporation of techniques that account for the "life cycle" of resources and waste, thus reducing environmental impacts of the project. Green Build techniques include: use of pervious concrete, building orientation that utilizes passive solar lighting, and CA native landscaping. We promote the work of the SLO Green Build (www.slogreenbuild.org) and encourage their input in the project.

6. Cultural impact – actively involving the Los Osos Community Services District and citizens throughout the project development process, selection of a treatment system reflective of the community priorities and locating treatment facilities with respect to the community's sensitive cultural and environmental resources. Additionally, we support the request of the Northern Chumash Tribal Council to utilize collection technologies that do not require deep trenching (ie., STEP/STEG) to avoid disturbing archeological sites of significance.

7. Collection system – pressurized design that reduces Infiltration and Inflow (I&I) and allows for diagnosis and repair of breaks or leaks in the system as they develop, in part, to prevent sea water intrusion/contamination of reclaimed water sources. With collection system costs estimated at up to 65% of the project we promote examination of STEP/STEG and "Decentralized" Wastewater Management options.

Submitted by the San Luis Bay Chapter of the Surfrider Foundation

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Attachment II

Surfrider Foundation®

San Luis Bay Chapter

Statement of Key Environmental Issues
Los Osos Wastewater Treatment Project: Collection System

EXECUTIVE SUMMARY

Central to the missions of our groups is sustainability – protecting, preserving, and restoring for future generations the environmental, social, and economic gifts and opportunities we enjoy. Integral to this larger mission is protecting the past, the cultural resources of the California Native American Chumash, and, preserving and enhancing local watersheds, on which other vital systems depend, including coastal ecosystems. We agree that selecting the appropriate collection alternative for the LOWWP, a major component of the project, is key to the project's sustainability.

To achieve sustainability the collection system for the LOWWP should:

- Provide the greatest possible protection against overflows and other releases of partially treated or untreated wastewater from the system, which could pollute Morro Bay Estuary and other sensitive coastal ecosystems (e.g. Sweet Springs Nature Preserve).
- Provide the greatest possible protections to the groundwater of the Los Osos water basin.
- Avoid environmental impacts related to construction and installation of the system to the greatest extent possible, including the impacts of open trenching, e.g., dewatering, soil stabilization, and street reconstruction.
- Avoid impacts to Native American Chumash sites to the greatest extent possible.
- Provide the most energy-efficient solution and enable the use of clean, renewable energy sources, avoiding environmental impacts related to non-renewable energy production (e.g., GHG emissions).

The project's environmental sustainability is ultimately tied to its social and economic sustainability. Therefore, we believe that the project should be as affordable as possible to promote the project's sustainability.

Considering the site-specific characteristics of Los Osos – proximity to Morro Bay National Estuary (a State Marine Reserve), a Prohibition Zone, hilly terrain, sandy soil prone to shifting and liquefaction, high ground water, and sites of cultural significance to the California Native American Chumash – we agree that a STEP/STEG collection system is the

most environmentally appropriate alternative. Based on our review of the LOWWP project reports and our own research, a STEP/STEG collection system affords significantly greater protections to the groundwater, sensitive ecosystems, and culturally significant sites in the area than either a conventional gravity collection system or a low pressure-conventional gravity combined system (LPCS) – while also providing other benefits important to a sustainable project.

We thank Chairman Patterson for the opportunity to provide input on this important matter, and the Board for its support for sustainability as stated in the LOWWP *Mission Statement*. This report contains our analysis of STEP and gravity collection systems, and conclusion regarding the collection system we see as the environmentally appropriate solution to meet the complex needs of Los Osos.

INTRODUCTION

After the August 5, 2008, San Luis Obispo County Board of Supervisors Los Osos Wastewater Treatment Project (LOWWP) Update, Chairman Patterson requested that local environmental groups prepare an informational document that analyzes the environmental benefits and impacts of the collection systems under consideration for Los Osos and include a recommendation for an environmentally preferred system. The following is the work product of the San Luis Bay Chapter of the Surfrider Foundation, Santa Lucia Chapter of the Sierra Club, SLO Green Build, Los Osos Sustainability Group, The Terra Foundation, and Northern Chumash Tribal Council.

The collective mission of our organizations is to preserve, enhance, and protect the biological health of our coastal environment and its contributing watersheds as well as the cultural resources of the California Native American Chumash. We are aligned with the statement of Jonathan Todd, CEO of the natural resources planning firm Todd Ecological, Inc., that the fate of the bay is dependent upon the town's having a managed wastewater system.[xlviii] Los Osos' proximity to the least tidal area of the bay makes a sewer system a necessity. The consideration of the type of collection system and the treatment plant's location is also vital to the protection of the coastal environment and watershed.

We appreciate Chairman Patterson's request that we *differentiate* between the two primary collection systems being considered, STEP/STEG and conventional gravity combined with low pressure. We recognize that the Draft EIR has not yet been released nor has the NWRI Independent Peer Review occurred. We are specifically responding to Chairman Patterson's request for input at this time and hope that the following will raise issues that will receive further evaluation in the environmental review process.

BACKGROUND

Los Osos is located on the "Back Bay" of the Morro Bay National Estuary. A portion of the community, about 5,000 residences, has been designated a "Prohibition Zone" by the Central Coast State Regional Water Quality Control Board. This portion of the community, much of it adjacent to the bay, is the site of the LOWWP. The terrain in the Prohibition Zone is hilly with sandy soil, so the area is prone to ground movement and liquefaction with earthquakes or severe weather conditions. Due to the hydrogeology of the basin, many areas have high groundwater, even in the higher elevations, while the Prohibition Zone's location makes the groundwater basin (and collection system) prone to the effects of seawater

intrusion – a factor particularly relevant with predicted sea level rises due to global warming trends. Having been a district of Chumash villages for thousands of years, Los Osos is situated on top of land that is of great sacred and cultural significance to the California Native American Chumash. Further, socio-economic factors come into play. A significant percentage of residents are retired, on fixed incomes, with most of the community middle and lower income. For these reasons, constructing a wastewater project in Los Osos requires a balance of environmental, cultural, social, and economic considerations in order to decide the most appropriate collection system solution. The solution must be in accord with the balanced metrics of Environmental, Social, and Financial Sustainability.[xlix]

A key consideration is the fact that the portion of the Morro Bay Estuary adjacent to Los Osos and the Prohibition Zone was recently designated a State Marine Reserve. The Department of Fish and Game has stated Marine Reserves "shall be maintained to the extent practicable in an undisturbed and unpolluted state," and that "Take is not limited to fishing activities…. The high level of protection created by an SMR [State Marine Reserve] is based on the assumption that no other appreciable level of take or alteration of the ecosystem is allowed (e.g., sewage discharge…)." [l]

Alex Hinds, former SLO County Director of Planning and Building, noted, "As wetlands continue to disappear, Morro Bay's international significance continues to grow. Morro Bay supports many birds protected by international treaty and provides a secure harbor for offshore marine fisheries." [li] Unlike the recent CMC 20,000 gallon raw sewage spill into Morro Bay, a spill from Los Osos would not have 6 miles or 10 minutes of dilution provided by creek waters before impacting the bay. The impact would be to the part of the bay with the least tidal flux. Therefore, it is imperative to build a collection system that offers the greatest protection to the bay.

DISCUSSION

In our analysis of the two collection systems, we have identified several key issues relating to wastewater collection and have examined each collection system within the context of these issues:

1. I/I (Inflow/Infiltration) and Exfiltration

In line with our mission to preserve, enhance, and protect the biological health of our coastal environment and its contributing watersheds, one of our primary concerns is I/I (Inflow/Infiltration) and exfiltration. I/I is water leaking into a collection system; exfiltration is sewage or effluent leaking out. Both occur where a system is not sealed (water tight). Some main sources of I/I are rainwater (during storms), seawater (in locations near a bay or open ocean), and groundwater (in high groundwater areas). A system prone to I/I is also prone to exfiltration because both originate from leaks in a system. Peaks in I/I can lead to SSOs (Sanitary System Overflows), while significant exfiltration can pollute ground water and surface waters (through subsurface percolation and seeps). SSOs and exfiltration are leading causes of ground and surface water pollution in the United States.[lii] P36-29

Contamination from raw sewage leaks would violate protection measures afforded by the bay's designation as an SMR and would be detrimental to the health of the bay, local wildlife, and the fishing industry. Prevention of sewage spills and unregulated discharges that would degrade coastal water quality or harm marine resources is consistent with Sections

30230 and 30231 of the Coastal Act, as well as Section 2852(d) of the California Fish and Game Code.

By demarcating part of Los Osos a "Prohibition Zone", it appears that the CCRWQCB identified what they see as the "low-lying area." As such, the structural integrity of the collection system, be it STEP or conventional gravity, is key to preventing I/I and exfiltration into the groundwater basin and SMR. Furthermore, future sea level rise could cause additional I/I and exfiltration issues that need to be considered. Conservative global warming predictions estimate sea level rise to be between 8 inches to two feet by 2050.[liii] This will only be 35 years into the LOWWP's lifespan. It has also been predicted that the rise in tides will bring larger coastal storm events, which further affirms the need for a sealed pipe solution that minimizes I/I and exfiltration and avoids capacity stressors to the system.

STEP/STEG Collection System:

The STEP/STEG collection system (hereafter referred to as STEP) by design is a sealed pipe solution, with pipes laid (on average) at 4 feet deep following the natural topography. Because of the shallowness of the pipe (compared to gravity pipe being between 7'-23' deep) there is ease in leak detection, clean up and repairs. The matter transported through the pipes is effluent, not biosolids sewage as with gravity, thus reducing the impacts of leaks polluting the groundwater. Furthermore, there is a greater soil interface with STEP, which creates a barrier to pathogen transport. Any excessive pumping due to leaks would be known immediately through the nearly real-time feedback information of STEP pump activity; if there were a pipe rupture or pinhole leak, it would be detected early on.[liv] STEP systems do not require manholes, further reducing potential I/I that would result from runoff or storm events.

The most likely place for I/I issues in a STEP collection system is between the STEP tank and connection to the house. Prevention of I/I at this location can occur with maintenance and monitoring just as with on-lot monitoring of I/I with a gravity collection system.[lv] As noted in the Technical Memorandum, "Flows and Loads", I/I within a STEP collection system "presumably would be much lower than that estimated for a gravity collection system." [lvi] Per Dr. Tchobanoglous' comments in the *Release of Draft Fine Screening Report*: all existing septic tanks must be replaced if a STEP system is used. This is to assure a watertight system from the beginning.[lvii] P36-29 CONT

Conventional Gravity Collection System:

A conventional gravity (combined with low pressure) collection system (hereafter referred to as gravity) can also be fusion welded, but the LOWWP Project Team has not indicated a firm position on the scope and extent of sealing. This is best summarized by an excerpt from the Technical Memorandum, "Flows and Loads", which states, "If a gravity collection system is selected, only a system that was constructed of fusion-welded PVC piping could be operated with as little I/I as the other types of systems." [lviii] The LOWWP *Fine Screening Analysis* points out that an active maintenance program can reduce I/I in a gravity collection system, but the maintenance would be more expensive than for STEP.[lix] More detailed concerns include the following:

- A conventional gravity system means 45+ miles of pipe laid will have approximately 12,000 unfused joints (this figure does not include the additional 5,000 connections to homes nor the lateral joints every 20 feet from

the main to the residences).[lx] Even with the newer PVC pipe, gravity bell and spigot joints are known for loosening over time and will be laid at a *minimum* of 7 feet in depth (pipes will be laid 7'-9' deep in 63% of the roads, 10'-14' deep in 34% of the roads, 14'-18' deep in 2% of the roads and 18'-23' deep in 1% of the roads – compared to 4 feet for STEP), making leaks more difficult to detect and expensive to repair.[lxi] According to the LOWWP *Fine Screening Analysis*, Section 1.3, there is a higher risk of ground water pollution with gravity than with STEP because of the bell and spigot joints loosening over time. Exfiltration from the loosened joints would further pollute Los Osos' drinking water as well as have damaging impacts to the bay.[lxii]

- The sandy soils of Los Osos make conventional gravity bell and spigot pipes particularly vulnerable to earthquakes, increasing the chances of I/I and exfiltration.
- 807 manholes (each with 2-4 unfused manhole penetrations) are proposed for the gravity collection system, where STEP has none.[lxiii] Here, too, is an opportunity for I/I and exfiltration: rainwater that would have recharged the aquifer is taken to the treatment plant for treatment instead, and, in a major storm event, this load on the collection system can cause sewage to be pushed up through these openings. Again, STEP is a sealed system so these issues are negligible. Furthermore, the STEP tank is designed with a 1-2 day emergency holding capacity for a storm event.
- For Los Osos, a conventional gravity collection system requires 20 pump stations, which also makes the system more susceptible to I/I and exfiltration due to surges and/or system failures (pumps and valves). Larger conventional gravity pipe (8" diameter) allows for greater I/I, whereas STEP's 3-4" diameter pipe is more restrictive simply because of the size. As the NWRI Independent Advisory Review stated December 4, 2006, "The economic benefits to reduced inflow and infiltration (I/I) achieved by the use of small-diameter effluent pressure collection should be considered in the cost estimate for alternative treatment technologies." [lxiv] P36-29 CONT
- It is our understanding that at present 5% of the gravity collection pipe will be laid in groundwater thus requiring dewatering to install it. This will also make the pipe more susceptible to causing groundwater pollution from exfiltration.
- Unlike a STEP tank, which settles out greases through pretreatment, gravity collection pipes carry greases to the treatment plant. As stated by the State Water Sources Control Board, grease blockages (along with manhole structure failures, pump station mechanical failures and excessive storm or ground water I/I) are a major cause of SSOs.[lxv] SSOs may pollute surface and ground waters, threaten pubic health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.[lxvi]
- The newer PVC gravity pipe has a maximum allowable exfiltration rate, which indicates that exfiltration is assumed and already calculated into the system's design.[lxvii]

Summary:

The LOWWP *Fine Screening Analysis* estimates the average wet weather flow for a LOWWP conventional gravity system will be 200,000 gallons/day more than for a STEP system due to I/I. The LOWWP Technical Memorandum "Loads and Flows" estimates a

gravity system's peak storm flows will be 800,000 gallons/day more than STEP (2.5 million gallons/day versus 1.7 million gallons/day). These peak flows make a gravity system more susceptible to controlled or uncontrolled releases of partially treated or untreated sewage.[lxviii] The Regional Water Quality Control Board notes, "Communities need to address overflows during sewer system master planning and facilities planning," and, based upon these findings, a collection system that uses sealed pipes would be environmentally preferable to minimize I/I, exfiltration, and associated releases of sewage as well as to allow for diagnosis and repair of breaks or leaks in the system as they develop.[lxix] Therefore, we see STEP as the environmentally preferred collection system technology as regards this key issue.

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2. Soil Disturbance – General

Soil disturbance is a key issue with two separate components: General, and, California Native American Chumash Sites. This section addresses the general issues of soil disturbance, runoff pollution, road and traffic disruption and personal property disruption. The size and depth of soil displaced for gravity pump stations and for the 45+ miles of deep trenches for gravity pipe to be laid or for placing STEP tanks into the ground on properties will be analyzed.

STEP/STEG Collection System:

STEP tanks require soil displacement approximately 8'W x 14'L x 8'D (approximately 23 cubic yards) to accommodate the 1,500 gallon tank measuring 6'W x 11'L x 6.25'D.[lxx] To reduce disturbance of personal property in the case of a STEP collection system, boring (as opposed to trenching) can be used to connect the lateral pipe to the STEP tank. There is very little road/traffic disturbance for boring the 4-inch diameter opening for inserting STEP pipe in roads, and it can be laid within 12-18 months. To further reduce soil disturbance, with 75% of the septic systems in front yards, STEP tanks can go where septic tanks are now with site enlargement. STEP tanks are approximately 50% larger than the preexisting septic tanks.[lxxi] Boring avoids the significant impacts and mitigations associated with excavation, runoff pollution, and dewatering open trenches in high groundwater areas (e.g., disposing of the polluted water).

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On-lot disturbance for monitoring and maintenance is equivalent to other utilities' on-lot disturbance (e.g. electricity, water, and gas) though usually only once/year instead of once/month.

Conventional Gravity Collection System:

For gravity, pipes will be laid 7'-9' deep in 63% of the roads, 10'-14' deep in 34% of the roads, 14'-18' deep in 2% of the roads and 18'-23' deep in 1% of the roads.[lxxii] It is estimated that the width of the 7'-8' feet deep trenches will be a minimum of 6 feet for the trenches spanning 45+ miles.[lxxiii] A gravity collection system will also require disturbance of personal property in the form of trenching the lateral connection to the house and the decommissioning of the septic tanks.

There will be additional gravity collection soil disturbance for building 12 Pocket pump stations (10'L x 10'W x 10'D), 6 Duplex pump stations (10'L x 10'W x 10'D), and 2 Triplex pump stations (12'L x 12'W x 12'D). Additionally, Duplex and Triplex stations require a standby power station that will also add to soil disturbance.[lxxiv]

Open trenching requires shoring, restabalizing soils, and reconstructing streets for the 45+ miles of trenching as well as for the 20 pump stations. Unlike STEP, the soils removed are hauled away and new material brought in that can be compacted and stabilized to allow maintenance of the required pipe grades. The trenches must be dug deeper than the actual pipe level to allow room for the new compactable material.

On-going monitoring and maintenance will be an on-lot disturbance to prevent on-lot gravity I/I and exfiltration.

P36-30 CONT

Summary:

Conventional gravity trenching will greatly impact roads/traffic for a minimum estimated time of two years.[lxxv] The reduced time to bore for STEP pipe means lower construction costs and fewer impacts to roads and traffic. Based on the similarity of width and depth, the calculations of mileage length required to install 5,000 STEP tanks (compared to the 45+ miles of gravity pipe trenching) is less than 14 miles and is only 7 miles if STEP tanks are placed where the septic tanks are now.[lxxvi] The cubic yard soil disturbance estimates are 440,000cy for gravity versus 260,000cy for STEP.[lxxvii] We understand that the County is considering trenching the STEP lateral pipe with 4-feet deep trenches (but bore the 45+ miles for STEP mains). This trenching of the laterals appears unnecessary when horizontal boring can be utilized and displaces significantly less soil. Based on our analysis, we disagree with the statement on soil disturbance made by TAC member David Dubink during a meeting of the LOWWP Technical Advisory Committee estimating that STEP and conventional gravity collection systems will displace an approximately equal amount of soil, and instead find that STEP/STEG will displace less soil.

3. Soil Disturbance – Native American Chumash Sacred Sites

The town of Los Osos, the Valley of the Bears, was built on an ancient Chumash district, multiple villages occupied for thousands of years.[lxxviii] In 1990, over 60 new Chumash archaeological sites were recorded in the area of Los Osos.[lxxix] Because of this, the aforementioned environmental groups support the Northern Chumash Tribal Council (NCTC) in their position that "the least amount of ground disturbance in Los Osos is the best." [lxxx] Ancient Chumash sites are to "remain avoided whenever possible and complete data recovery when we have to disturb or destroy a site. Ancestral burials need to be avoided at all cost, and a plan in place for unavoidable encounters." [lxxxi]

Section 30244 of the Coastal Act also provides protections to archaeological and paleontological resources as identified by the State Historic Preservation Office requiring reasonable mitigation. Development would not likely be prohibited based on the presence of these resources, but steps to minimize impacts to these resources should be part of the development plan.

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STEP/STEG Collection System:

The LOWWP *Fine Screen* Section 3.3.2 addresses the impacts of STEP/STEG stating, "Archeological impacts will occur, but determination of extent will be made complicated by

subsurface installation (horizontal boring)," meaning damage to a site could occur for approximately 50' before evidence of damage is revealed.

As stated in the previous section, a minimum of 75% of the STEP tanks should be able to be located where there are currently septic tanks, creating less soil disturbance on properties and reducing the risk to California Native American Chumash cultural resources. For roadways, STEP is seen as preferred because the planned depth is 4' for horizontal boring that follows the natural topography. The LOWWP Technical Advisory Committee (TAC) in the *Pro-Con Analysis* showed that STEP is believed to pose less risk.[lxxxii]

When discussing the complexity of these issues, Fred Collins, Tribal Administrator for the Northern Chumash Tribal Council (NCTC), said, "With the data available today and with not having any meaningful communication with the County concerning this project, NCTC has determined after meeting with local environmental group members that if the STEP system and Gravity System were to be compared for soil disturbance and if both systems disturb the same amount of cubic soil, the surface 100 centimeters disturbance that the Gravity system would displace would be much more than the STEP system, therefore NCTC is supporting the STEP system. When you add the advantage of boring which is very accurate and with proper Archaeological planning and research using every means known (which includes Test Pits, Core Drilling, Ground Penetration Radar, Knowledge of the Chumash Elders, Geomorphology, Geology, Paleontology and Ground Disturbance Chumash/Archaeological Monitoring), the STEP system will be much more efficient and protect California Native American Chumash Cultural Resources in an effective way that will be the future for project planning." [lxxxiii]

If culturally significant sites are encountered in the installation of STEP tanks, greater flexibility and time is afforded to provide for proper care of the sites in accordance with cultural traditions. Furthermore, STEP pipe can be directed around preexisting buried utility lines and archeological sites.[lxxxiv] P36-31 CONT

Conventional Gravity Collection System:

The LOWWP *Fine Screening Analysis* states in Section 3.3.1, "Archaeological resources are located throughout the community and will require pipeline route relocation, or possible reburials" if conventional gravity is implemented, resulting in additional delays, costs and need for Change Orders.

For the NCTC, their greatest concern is the 45+ miles of gravity collection trenching as was confirmed by the LOWWP Technical Advisory Committee's *Pro/Con Analysis* which states that gravity collection poses a "higher risk of impacts on archeological resources." [lxxxv] With deep and wide trenching, sites and burials could be uncovered within the entire 45+ miles of trenched roads for gravity collection pipe because of Los Osos being a district with multiple Chumash village sites for thousands of years.[lxxxvi] With gravity systems, downhill slopes must be maintained at all times, therefore, an encountered site must be excavated and burials moved. Collins stated that with gravity collection, "this could be one mass grave relocation project." [lxxxvii] This also means the project would be stopped in those places where cultural resources are found delaying the project and increasing the cost.[lxxxviii]

Summary:

The information provided above substantiates that the STEP collection system construction would create the least amount of soil disturbance and minimize impacts as they pertain to the California Native American Chumash cultural resources in Los Osos.[lxxxix]

4. Energy Usage

Energy usage is important to consider within the LOWWP collection system because 20% of energy used in California is for the movement and treatment of water.[xc] Section 30253(4) of the Coastal Act requires that new development minimize energy consumption. The goal of AB 32 is to meet 1990 levels of energy usage by 2020 and an additional 80% reduction below that by 2050. The present septic tanks in Los Osos require zero energy, and this means any sewer project will *increase* energy use in Los Osos unless it is also designed to *generate* energy. Smart design, such as incorporating solar energy via photovoltaics and capturing methane, can reduce carbon emissions associated with other forms of energy.

STEP/STEG Collection System:

Dana Ripley, CEO of Ripley Pacific Company, estimates the overall power consumption would be 68% less with STEP collection and trickling filter secondary treatment than with the gravity collection/MBR design concept.[xci] Based on the 2006 rate, "the total power cost for collection, treatment, and distribution of the gravity/MBR design is approximately $960,000 per year assuming an effluent production volume of 1,455 acre-feet per year. The alternative STEP/trickling filter design option would have an annual power budget of approximately, $310,000 per year." [xcii] In a meeting on August 3, 2007, Greg Nishi, Account Representative for PG&E in San Luis Obispo, expressed to Dr. Mary Fullwood, Chuck Cesena and Dana Ripley that when comparing the STEP design of 2006 to the conventional gravity midtown project, STEP was significantly less demanding in energy usage and would qualify for a rebate to reward the project for its low-energy usage as well as adaptability in utilizing solar power, photo voltaics, for the ½ horsepower (hp) effluent pumps required for 95% of the residences. These low-energy pumps only run approximately 20 minutes/day.[xciii] It is easier to install solar with STEP collection than with gravity's larger municipal collection system pumps (5 hp and above) at the pump stations. The NWRI Independent Advisory Review stated December 4, 2006, "The economic benefits of septic treatment [i.e., STEP tank treatment] should be considered in the cost estimates for alternative treatment technologies. Such an analysis should also include the economic benefit of reduced biosolids production." [xciv] Because a STEP system allows natural processing (primary treatment) of solids on site in the STEP tanks, it reduces the total septage in the system by 75%, thus reducing the energy needed to treat and/or dispose of solids.[xcv] Lastly, the energy-free STEG component, a STEP tank that relies on gravity instead of pressure, has not been calculated into the STEP collection system design estimates because, as described by Dana Ripley, "We wanted to begin with a conservative starting point on energy consumption and defer the whole STEG issue to the detailed design stage. This is when we will have the resources to do the hydraulic grade profile based on final pipeline routing." [xcvi]

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Conventional Gravity Collection System:

As stated in the LOWWP *Fine Screening Analysis*, the energy usage of the gravity collection system is estimated at 500,000 kwh/year based on energy required to convey 1.4 mgd to an out-of-town treatment facility. STEP is estimated at 425,000 kwh/year based on energy required to convey 1.2 mgd to an out-of-town treatment facility.[xcvii] If the Low Pressure alternative is utilized in the high groundwater areas it will add approximately 400 2 hp grinder pumps to the gravity system.

Summary:

Since our findings regarding energy usage – which are reflective of industry-based comparative reporting – conflict with the information in the *Fine Screening Analysis* – which concluded that the energy usage of STEP and gravity collection systems would be equivalent – further evaluation of the energy usage information on both collection systems is needed. However, even if after further scrutiny and analysis, energy usage is found to be equivalent, the fact that STEP can easily utilize solar makes it favorable and likely to be rewarded by rebates and/or grants in this time of transition to renewable, low-carbon energy sources by the State of California.

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CONT

5. Water Conservation

Since water conservation is becoming a necessity for the State of California, and a key focus of the Morro Bay National Estuary Program (MBNEP), the Central Coast Regional Water Quality Control Board (CCRWQCB), San Luis Obispo County, and, the Los Osos Community Services District (LOCSD) – to name a few entities developing water conservation programs and Low-Impact Development (LID) practices, manuals and policy clearinghouses – it is only prudent to select the wastewater treatment option that facilitates the implementation of these measures.

STEP/STEG Collection System:

For STEP, the average wet weather flows are estimated at 1.2 million gallons per day (mgpd) with average peak storm flows estimated at 1.7 mgpd. According to wastewater systems experts, the STEP collection system enables greater water conservation and related energy-savings from reduced water and wastewater pumping.[xcviii]

There may be places where installation of STEP tanks will be in high groundwater areas and will require dewatering. However, dewatering would be limited to an 8 foot single spot compared to an 18 foot extended trench in highly permeable sandy soils with gravity sewers.[xcix]

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Conventional Gravity Collection System:

For gravity, the average wet weather flows are estimated to be 1.4 mgpd, 200,000 gallons per day (gpd) greater than for STEP.. The average peak storm flows are 800,000 gpd greater than STEP at 2.5 mgpd.[c]

The high levels of I/I associated with gravity reduce beneficial recharge of the basin's ground water by diverting rainwater into the collection system. I/I represents a substantial source of recharge (200,000 to 800,000 gpd during wet weather).

Gravity collection systems require greater volumes of water than STEP collection systems to function properly (to flush solids through the system), therefore, they set limits on the levels of conservation achievable by individuals and the community.[ci]

The LOWWP *Fine Screening Analysis* states, "a viable project could not result in an increase of the groundwater balance deficit, maintaining the existing basin balance (i.e. level 1) was considered the minimum viable project." Dewatering the trenches to lay gravity pipelines will use a considerable amount of water depleting the aquifer. This water will be polluted in the process and will need to be disposed of elsewhere (thus also a carbon

footprint/GHG concern). The dewatering of a Sewer Line Project in Salinas, California, for example, required pumps running around the clock for three weeks before the crew could work on the drained area. The pumps used for that specific project pumped a combined 12,000 gallons per minute in order to dewater the trenches. Because of the impact this would have on Los Osos' groundwater basin and the potential for drawing in seawater intrusion, we ask that the matter of dewatering be fully evaluated.[cii]

Summary:

Because of its ability to operate with reduced flows, the STEP collection system stands out as the superior collection system to facilitate increased water conservation measures.[ciii] As Ronald Crites and Dr. Tchobanogrous state,

> Although the use of conventional gravity-flow sewers for the collection of wastewater continues to be the accepted norm for sewerage practice in the United State, alternative collection systems…are becoming increasingly popular. In some areas the use of conventional gravity sewers is becoming counterproductive because the use of water conservation devices continues to increase. The minimum flows required for gravity-flow sewers to operate make them problematic where development occurs slowly in a large development or where water conservation reduces the wastewater flows significantly. In many cases, the water used to flush conventional gravity-flow collection systems for the removal of accumulated solids far exceeds the water saved through water conservation measures.[civ]

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6. Greenhouse Gas Emissions

Greenhouse gas emissions contribute to the rate of global climate change. The Intergovernmental Panel on Climate Change (IPCC) asserts that "most of the observed increase in globally averaged temperatures since the mid-twentieth century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations." [cv] The California Global Warming Solutions Act of 2006 (AB 32) requires reduction of greenhouse gas emissions below 1990 levels by the target year of 2020.

The complexity and depth of the issue of Greenhouse Gas Emissions as they pertain to collection systems construction, operation and maintenance is beyond the scope of this document and will be addressed more fully upon the release of the Draft EIR and the analytical report by the NWRI Independent Peer Review. Below, we have provided a brief overview of greenhouse gas issues generally pertaining to the collection systems, regardless of size, etc.

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STEP/STEG Collection System:

The LOWWP Tech Memo on Green House Gas Emissions raised significant concern for the emissions of methane by the STEP collection system. We acknowledge their concern as methane is released at the high points within the collection system; however, with innovation the gas could be captured and turned into an asset. This is already being done in 20% of all conventional wastewater treatment plants in the U.S. and typically supplies 30-50% of the plants' energy needs. For instance, Dana Ripley of Ripley Pacific Company recently shared the following:

> Anaerobic pretreatment followed by aerobic polishing can be a potential net energy producer, compared to conventional systems. Even with anaerobic solids digestion, conventional systems are net energy consumers. This is an intriguing concept since the STEP interceptor tanks are in fact already the "anaerobic pretreatment." The only missing element is collection of the biogas (50-75% methane) for energy production. I am currently working on a biogas collection system (from STEP tanks) for a project in the Central Valley and the concept just may have application in Los Osos. I discussed this concept with Dr. Tchobanoglous last Saturday, and we both feel that it is technically and economically doable. We would simply mimic the biogas collection systems used for about three decades in landfills, and apply it to the interceptor tanks. This is still on the drawing boards, but we hope to have it far enough along later this year that we include it in our team's response to the County's RFP. We know there is no (known) precedent for this for STEP tanks, however there is plenty of precedent for collection of similar biogas from dispersed landfill gas wells. Theoretically, if it works, the whole tertiary wastewater system could power itself and potentially produce an excess for sale to the grid.[cvi]

Regarding greenhouse gas emissions associated with operation of the collection system, we note that the advantage of primary treatment and holding at the STEP tank utilizes natural organisms to digest raw sewage, reducing demand and volume on treatment process and solids disposal, thus reducing pumping.

Because the collection system is integral to the treatment system, we must address the issue of methanol which is being recognized by the LOWWP as the only carbon source treatment solution for treating the high nitrate levels of effluent for a STEP treatment plant. As Bill Cagle, National Accounts, Orenco Systems Inc. stated, "Other sources used for de-nitrification include acetic acid, glucose, benzoic acid, and micro-C" without as great an impact on the environment.[cvii] Micro C, for instance, is derived from renewable agricultural products that are abundant in the United States while methanol (the current industry standard) is derived from non-renewable natural gas.[cviii] With an Agricultural Exchange/Reuse program, denitrification is unnecessary because the treated water containing nitrates could be used on selected crops eliminating the need for nitrate fertilizers. Lastly, after reviewing the County's figures for methanol, Greg Dolan, Vice President of the Methanol Institute, stated, "Based on actual operating experience, we show that methanol manufacturing plants emit 3.8 lbs of CO2 per gallon of methanol, versus the 15.6 lbs quoted in the County report." [cix]

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CONT

Conventional Gravity Collection System:

The LOWWP Technical Memorandum, "Project Alternatives Greenhouse Gas Emissions Inventory" does not address the GHG emissions of the gravity collection system but focuses on treatment. However, it does address GHG emissions as they pertain to construction. Gravity's GHG emission levels are approximately 20-25% higher than the GHG emissions estimated for the construction of a STEP system.[cx]

Like STEP, Gravity treatment also requires denitrification and this can be eliminated through the use of Ag Exchange.

Summary:

STEP systems have associated methane emission issues; however, with the implementation of a methane capturing solution, this problem could be mitigated and provide

further benefits in the form of an energy source for the wastewater project. Conventional gravity collection systems also contribute greenhouse gas emissions because the systems employ pumping, which is one of the greatest producers of GHG. To better understand the amount of greenhouse gasses that each collection system would contribute, we believe that GHG Emissions issues warrant further analysis beyond that provided in the LOWWP Technical Memorandum, "Project Alternatives Greenhouse Gas Emissions Inventory."

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CONT

7. Biosolids

Biosolids are a key environmental issue because the quantity and quality of biosolids dictate the likelihood of creating a small community composting facility, thereby allowing the liability of biosolids to become an asset.

STEP/STEG Collection System:

The primary treated biosolid from a STEP system yields itself more effectively to the future development of a small community biosolids composting facility that can transform the biosolids liability into a compost matter asset. At present, the new tertiary conventional gravity wastewater treatment plant at the California Men's Colony (CMC), one the same size as that proposed for Los Osos, 1.2mgd, produces 600 tons of biosolids per year which are hauled to Kern County twice/year. The expense for Kern County to receive the biosolids is $24,000/year and this does not include the cost of fuel/trucking or GHG emissions. Kern County is then turning the biosolids into compost and selling the CMC liability as their asset.[cxi]

STEP tank pretreatment reduces biosolids mass by 75% creating a more suitable matter and quantity to compost.[cxii]

Additionally, STEP collection systems provide short-term emergency storage in the STEP tank in the event of a major storm or if there is an on-lot system failure, thereby minimizing the risk of spills to the bay.

P36-35

Conventional Gravity Collection System:

A conventional gravity collection system pumps the biosolid as well as effluent through 45+ miles of pipe, and, as stated in the I/I and Exfiltration section, places the bay at greater risk during a major storm event or system/power failure (at the 20 pump stations).[cxiii] We have recently seen the damage caused by a gravity system failure with the CMC spill of 20,000 gallons of sewage going into the bay in 10 minutes.[cxiv]

The gravity collection system estimated solids volume is averaged at 4,000 lbs/day dry weight, meaning 730 tons/yr dry weight compared to STEP's 1,000 lbs/day dry weight, or 182.5 tons/yr dry weight. Gravity biosolids, therefore, are 75% greater in mass with associated impacts for hauling, GHG emissions, and land impacts.[cxv]

Summary:

The STEP collection system estimated solids volume is 75% less than that of gravity and therefore we believe that the pumping of primary treated biosolids every 5-10 years from a STEP system will be less in volume than the biosolids removed from a gravity system.[cxvi] Presently, the new CMC tertiary gravity sewer system, one the size planned for the LOWWP (1.2mgd), hauls 1,200 tons of solids annually to Kern County.[cxvii] Depending on whether the

LOWWP biosolids would need to be trucked out of the county or whether they are composted locally, the increased frequency of biosolid removal from STEP tanks could be viewed negatively or positively. However, the *Pro/Con Analysis* states that the STEP collection system "provides primary treatment in septic tanks, thereby reducing down-line costs for treatment system and solids treatment and disposal." [cxviii] We believe a STEP system yields itself more effectively to the future development of a small community biosolids composting facility for the above-stated reasons.

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8. Odors

Odors are an environmental-cultural-aesthetic issue. To live, play and work in a community, one hopes not to engage foul odors coming from a sewer system.

STEP/STEG Collection System:

The LOWWP Fine Screen Analysis states, "Odor control measures will be required at high points throughout the system where air within the piping is released to prevent air bubbles from forming. Odor control will consist of carbon media canisters that remove the odorous compounds such as hydrogen sulfide from the air as it passes through the media. The canisters and air release valves on the pressurized main lines would be enclosed in a small (approx. 3 by 4 by 4 feet) buried vault. STEP tanks would be vented to roof level, similar to existing septic tanks." [cxix]

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Conventional Gravity Collection System:

For gravity, the potential collection system odors would occur at the 807 manholes and 20 pump stations located throughout the community, however, the LOWWP *Fine Screen Analysis* has inadequately addressed gravity collection system odor issues and we request there be further analysis.[cxx]

Summary:

Rob Miller, Principal Engineer, Wallace Group, and, Vice Chair on the LOWWP Technical Advisory Committee, has noted that both collection systems have potential odor sources. For STEP they are slightly higher, but both can be managed.[cxxi]

9. Economic Sustainability

The collection system's economic sustainability is integral with balanced metrics of Environmental, Social, and Financial Sustainability." [cxxii] The LOWWP collection system should be as affordable as possible to promote its sustainability. Ultimately, a project's environmental sustainability is tied to its social and economic sustainability.

STEP/STEG Collection System:

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The LOWWP *Fine Screening Analysis* found that the STEP/STEG collection system would be the least costly.[cxxiii] Further refinement in costs, with further review and actual project bids, we believe, will reveal greater costs savings of a STEP/STEG collection system. As Jonathan Todd stated,

> I do feel that any sewering is better then none. The fate of the bay depends on it. That said, conventional gravity sewers are not the most cost effective or environmental solution for Los Osos. I believe that a small diameter pressure system will suit the community best.[cxxiv]

Determining the number of STEG units (without pumps) needed for the STEP/STEG collection system will further reduce the cost of the collection system and its energy usage impact. STEP tanks placed in the 25% of backyards which already have their septic tanks located there would also decrease energy demands as well as the expense of the collection system (eliminating the need for 2 hp grinder pumps).[cxxv] Reevaluating the notion that STEP tanks must be pumped every five years will also reduce the cost and GHG emissions from pumping. STEP tank primary treatment reduces biosolids by 75% that of conventional gravity (182.5 dry weight tons/year instead of 730 dry weight tons/year) and the health and effectiveness of the STEP tank is dependent upon the biosolids ecosystem where an average pumping of every 10 years is adequate.[cxxvi] Furthermore, because of the significant reduction in biosolids, hauling costs are reduced and creating a small community composting facility is more viable.

The cost of the entire STEP/STEG system can be further reduced during treatment through Ag-Exchange, wherein certain crops could utilize the treated water containing nitrates (thus eliminating the need for fertilizer). Cost reductions, reduced energy usage, and reduced GHG emissions would occur by replacing methanol with a less toxic and dangerous carbon source denitrification solution. Every gallon of MicroC used (instead of methanol) saves the energy equivalent of heating 0.5 US households per day or providing electricity for 0.7 US households per day. MicroC requires only one third the overall energy input as methanol. The manufacturing and distribution of MicroC is far less energy-intensive than methanol and results in an overall energy savings of 72,000 BTU for each gallon of methanol replaced by MicroC.[cxxvii]

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CONT

Conventional Gravity Collection System:

The potential need to seal (fuse weld) bell-and-spigot joints in significant portions of a gravity collection system to achieve minimum environmental safeguards (e.g., against earthquakes, I/I and exfiltration, to meet CCRWQCB Prohibition Zone zero discharge requirements, and future sea level rises with predicted increases in storm and tidal energy) have yet to be factored in to the cost of a gravity system. However, the LOWWP *Fine Screening Analysis* does address the cost of loosening bell-and-spigot joints: "Properly installed bell-and-spigot sewers will be watertight at first, and then slowly lose their integrity as the surrounding soils shift, compressing the pipes, and compromising their seals at the joints. The water-tightness of a bell-and-spigot sewer can be preserved if a maintenance program is conducted on an ongoing basis to detect and repair leaks. This program would add to the cost of a gravity sewer compared to a STEP/STEG sewer with similar levels of I/I." [cxxviii]

The gravity collection system estimated solids volume is averaged at 4,000 lbs/day dry weight, meaning 730 tons/yr dry weight compared to STEP's 1,000 lbs/day dry weight, or, 182.5 tons/yr dry weight. Gravity, therefore, has a 75% greater impact on hauling fees and associated GHG emissions.[cxxix]

The costs of the gravity system can be reduced through Ag-Exchange, wherein certain crops could utilize the treated water containing nitrates (thus eliminating the need for fertilizer).

Summary:

At present, the LOWWP *Fine Screening Analysis* has determined that the STEP system is the least expensive without factoring in the above-stated environmentally enhancing solutions that would reduce the cost of the STEP system even further. In contrast, the LOWWP *Fine Screening Analysis* has not factored in the cost of fuse welding gravity collection system pipes in the high groundwater areas or factored in fuse welding gravity collection system pipes in the areas that will be impacted by an 8 inches to 2 feet sea level rise prediction within the lifespan of the LOWWP.[cxxx] Based on the economic benefits, that the LOWWP *Fine Screening Analysis* shows STEP as potentially $25 million less expensive than gravity in construction costs, it further substantiates the conclusion that STEP is the environmentally sustainable preferred solution.[cxxxi]

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CONT

CONCLUSION

Morro Bay is the only major California estuary south of San Francisco that is not significantly altered by human activities and, based on the factors outlined above, we believe that a STEP collection system will best assist the bay's protection and stands out as the environmentally appropriate collection system for Los Osos.

We are very pleased to have had the opportunity to make this assessment upon Chairman Patterson's request. We look forward to seeing these issues will be addressed within the scope of the upcoming NWRI Independent Peer Review and to participating in the future stages of the LOWWP and the soon-to-be-released Draft EIR. We close with a statement by Chumash Elder, Fred Collins,

> It is time for the community of Los Osos to come together and get this job done. As we go into the future, we want our great-grandchildren to be able to enjoy the Back Bay as it once was, and they will possibly study this challenge as one where all people came together to accomplish a great task.[cxxxii]

Submitted by:

The San Luis Bay Chapter of the Surfrider Foundation

slb@surfrider.org / www.slosurfrider.org

Surfrider Foundation is a non-profit environmental organization dedicated to the protection and enjoyment of the world's waves, oceans, and beaches for all people, through conservation, activism, research and education.

The Santa Lucia Chapter of the Sierra Club

http://santalucia.sierraclub.org/

The mission of the Sierra Club is to explore, enjoy and protect the wild places of the earth; To practice and promote the responsible use of the earth's ecosystems and resources; To educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

SLO Green Build

SLO Green Build is a non-profit group of architects, builders, community planners and area residents dedicated to increasing the use of green building on the Central Coast. We help local governments, building professionals and homeowners design, construct and remodel homes and facilities using sustainable building practices and materials.

http://www.slogreenbuild.org/

Los Osos Sustainability Group

The mission of the Los Osos Sustainability Group is to participate locally in the worldwide effort to protect, preserve, restore, and expand for future generations the environmental, social, and economic gifts and opportunities enjoyed by current generations.

The Terra Foundation

www.terrafoundation.org (under construction)

The Terra Foundation works toward creating and enhancing connection with the earth through community education and stewardship of the land.

Northern Chumash Tribal Council

http://northernchumash.org/

NCTC mission is to offer a foundation for the Chumash people of San Luis Obispo County to bring our culture and heritage back to life, create dignity with the people, educate the public that the Chumash have always been here we have not gone anywhere and we will always be here, one continuum. We are the Chumash of over 20,000 years of habitation in San Luis Obispo County.

Attachment III:

Ripley Pacific Team
Los Osos Wastewater Management Plan Update

TECHNICAL MEMORANDUM # 7

Author: Mike Huck
Reviewer: Bahman Sheikh
Date: July 24, 2006
TM Title: Los Osos Growers' Field Trips to Monterey Area

General Information

Field trips to Monterey area were organized for Los Osos area nurserymen, growers and landowners on June 16 & July 20, 2006. Although water recycling in agriculture is also being done more locally in the Santa Maria area, the Monterey Regional Water Pollution Control Agency (MRWPCA) program was specifically selected for the tours since it has over eight years of operating history. Additionally, of the over 12,000 acres served by the project, only 76 acres are non food crops (ornamental flowers and bulbs). Additionally a nearby recycled water reservoir similar in size to what the Los Osos project would require was toured in the Del Monte Forest, on the Monterey Peninsula within the Pebble Beach community.

Attendees

Over a dozen individuals representing nursery and agricultural concerns from the Los Osos area were invited via personal visits and phone calls to attend these trips. Unfortunately many of these individuals had previously scheduled personal and professional obligations (weddings, vacations, and other work related obligations, etc.) that interfered with their attendance and only four individuals were able to attend the field trips. Those individuals who could not attend mentioned that they would contact one of the attendees to discuss the information gathered regarding the Monterey water recycling project tours.

It is important to recognize that the individuals who did attend are potentially "key players" in the Los Osos recycled water irrigation reuse / agricultural exchange plan. They had interest in the program, desired more information and also represented as the landowner or land lessee over 250 irrigated acres over the groundwater basin in Phase A and over 450 acres in Phase D area off the groundwater basin.

The individuals representing the Los Osos area nursery and agricultural community attending the field trips included:

- Elliott Paulson - Owner, Clearwater Color Nursery (June 16)
- John Giacomazzi - Landowner of Site D, and Landlord to Dohi Vegetable Farms (June 16)
- Hugh Dohi – Dohi Vegetable Farms (July 20)
- Alan Eto – Agricultural Seed Salesman, Landowner and Landlord to Dohi Vegetable Farms (July 20)

Also in attendance representing the Ripley Pacific team included:

- Dana Ripley (June 16)
- Bahman Sheikh (June 16)
- Tom Ruehr (June 16 & July 20)
- Mike Huck (June 16 & July 20)

Field Trip Activities and Key Messages Presented

Each trip departed from Los Osos at approximately 7:00 am and returned around 5:00 pm. During the drive to and from the Monterey area Tom Ruehr provided an invaluably comprehensive discussion with the growers regarding the chemical differences between recycled water & groundwater and how the water can be treated to adjust pH and/or SAR. Various other subjects regarding soil science, plant nutrition and other general agricultural topics were also discussed while enroute. In Monterey, the participants were provided the following opportunities:

- Touring the Monterey Regional Water Pollution Control Agency (MRWPCA) water recycling facilities to allow the Los Osos growers to better understand what is involved in the production of Title 22 disinfected tertiary treated recycled water.
- Meeting Monterey area growers and asking questions regarding their experiences using recycled irrigation over the past eight years, regarding soil salinity management, plant nutritional and food safety concerns.
- Discussions with MRWPCA staff regarding seawater intrusion as the driving force for instituting the water recycling program.
- Touring various vegetable crop fields irrigated with recycled water, observing the turnout connections and discussing system operations with MRWPCA operational staff.
- Touring the Forrest Lake Reservoir located on the nearby Monterey Peninsula within the Del Monte Forrest's community of Pebble Beach. This tour al-

lowed growers to visualize the storage requirement for Los Osos. The Forest Lake Reservoir is comparable in size to the projected storage needed for the Los Osos project. This also demonstrated that with proper management stored recycled water presents no concern regarding odor, since multi-million dollar homes are located within 200 to 300 feet or the eastern shoreline overlooking the reservoir.

The growers learned that the MRWPCA currently has 95% voluntary participation of growers irrigating with recycled water and more recycled water would be used if recycled water was available for 100% of their needs.

As reported by the MRWPCA, they estimate that during a severe drought there would only be a 5% reduction of recycled water production.

Attendees of the July Monterey Field Trip discuss recycled water monitoring with the MRWPCA laboratory staff.

Attendees of our June Monterey Field Trip discuss field operations with MRWPCA operations staff.

Tour Results and Other Interested Parties

After the completion of the two field trips it was apparent that many of the concerns and questions of growers and landowners had been resolved. Mr. Giacomazzi shortly after his attendance to our June trip sent a letter of interest for consideration of enough water to irrigate approximately 150 acres. Mr. Eto commented that he is willing to consider recycled water when it becomes available. Mr. Paulson wanted to know when recycled water deliveries might be available for his nursery. Mr. Dohi said he feels confident there would be no problem growing his vegetable row crops with recycled water and the final decision in his case would be in the hands of his landlords. Mr. Dohi also commented that in dry seasons recycled water would assure him he had an adequate quantity of water available for irrigation.

In addition to growers on the basin two inquiries for recycled water have been received for currently dry-farmed land off the groundwater basin. Both individuals were investigating purchase of the 640 acre ranch that is currently for

sale on the west side or Turri Road and wanted to acquire an irrigation water source. Each individual has been informed that the first priority for recycled water will go towards in-lieu recharge (exchange of groundwater extracted from the Los Osos aquifer now used for irrigation purposes). After that any remaining recycled water may become available for irrigation use off the groundwater basin.

ENDNOTES

[i] p.1-13
[ii] *LOWWP DEIR*, Appendix A, p.23.
[iii] California Department of Fish and Game. *Master Plan for Marine Protected Areas,* April 13, 2007 (p. 52).
[iv] Pismo Beach Spill - Sewage spill reported in Pismo Beach January 7, 2009. See David Sneed, *Telegram Tribune*.
[v] CMC Spill – 20,000 gallons of sewage flowed from CMC into Chorro Creek and out to Morro Bay Jan 27, 2008. See David Sneed, *Telegram Tribune*. An additional 200,000 gallons of sewage were diverted to the old treatment plant. Cause was power outage followed by the failure of the back-up generator in the new gravity treatment plant, through quick action the ¼ million gallon spill was not added to.
[vi] Crawford, Multari & Clark Associates. *Final Environmental Impact Reportfor the Los Osos Community Service District Wastewater Facilities Project* (SCH# 9911103), November, 2000. p.310.

[vii] Dana Ripley, Ripley Pacific Company. Personal communication with Dr. Mary Fullwood, August 17 and 19, 2008.
[viii] See Table 3.4, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007. This figure can be 100% if STEP tanks also go in the 25% of septic locations in backyards.
[ix] Ron Crites and George Tchobanoglous, *Small and Decentralized Wastewater Management Systems* (New York: McGraw-Hill, 1998), 371.
[x] LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4.
[xi] Rob Miller noted, "Where very deep trenching is required, the width depends heavily on the method of construction. There are costly ways to keep the trench impact narrow, but it requires specialized shoring equipment." Rob Miller, Principal Engineer, Wallace Group and Vice Chair, LOWWP Technical Advisory Committee. Personal communication with Dr. Mary Fullwood, August 11, 2008.
[xii] See Table 3.1, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007.
[xiii] This estimate is based on the contract estimate for the previously proposed conventional gravity midtown project which is now being considered in relation to alternative systems and locations.
[xiv] See Table 3.4, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007. This figure can be 100% if STEP tanks also go in the 25% of septic locations in backyards.
[xv] This General Finding was provided by County Public Works Environmental Projects Director, Mark Hutchinson, at the meeting with environmental groups on December 19, 2008. Also see *LOWWP DEIR* Appendix B – 3.4. Ron Crites and George Tchobanoglous, *Small and Decentralized Wastewater Management Systems* (New York: McGraw-Hill, 1998), 347.
[xvi] *LOWWP DEIR*, pp. 3-20; SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, 1-11; and, SLO County LOWWP Development, *Technical Memorandum: Flows and Loads*. Final Draft, February 2008, p. 11.
[xvii] See the County's LOWWP website http://www.slocounty.ca.gov/PW/LOWWP.htm.
[xviii] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, p. 5-4, Table 5.1. Metcalf & Eddy | AECOM written by T. Asano, F. Burton, H. Leverenz, R. Tsuchihashi and G. Tchobanoglous, *Water Reuse: Issues, Technologies, and Applications* (New York: McGraw-Hill, 2006), 770.
[xix] Ronald Crites and George Tchobanogrous, *Small and Decentralized Management Systems*. New York: McGraw-Hill, 1998, Table 6-1, p. 348.

[xx] Ronald Crites and George Tchobanogrous, *Small and Decentralized Management Systems.* New York: McGraw-Hill, 1998, p. 8.
[xxi] Ron Crites and George Tchobanoglous, *Small and Decentralized Wastewater Management Systems* (New York: McGraw-Hill, 1998), 1009.
[xxii] Larry Allen, Executive Director, SLO County Air Pollution Control District. Panel presentation, *Faith, the Environment and You* hosted by Congesswoman Lois Capps at First Presbyterian Church, San Luis Obisop, CA, August 6, 2008.
[xxiii] "Overview of Sea Level Rise and Some Implications for Coastal California", Prepared by the staff of the California Coastal Commission, June 1, 2001.
[xxiv] *LOWWP DEIR*, p. 3-34: "Emergency power generators would be provided for the larger pumps but not the pocket pumps."
[xxv] *LOWWP DEIR* p. 3-32. For gravity collection - 2 large pump stations with 30-60hp triplex pumps in 12 ft diameter vaults, 5 of 7 w/ 3-10 hp (Note there are 8 shown on maps – need to evaluate the energy consumption of the Pump Station that has been overlooked in the text but not in the maps.) 12 Pocket pumps would be 1hp in 10 ft diameter vaults.
[xxvi] See, for instance, p. 3-56 text stating 7 major pump stations and Exhibit 3-9 map shows 8.
[xxvii] Larry Allen, Executive Director, SLO County Air Pollution Control District. Panel presentation, *Faith, the Environment and You* hosted by Congesswoman Lois Capps at First Presbyterian Church, San Luis Obisop, CA, August 6, 2008.
[xxviii] *Los Angeles Times* article, 12/26/08.
[xxix] "Overview of Sea Level Rise and Some Implications for Coastal California", Prepared by the staff of the California Coastal Commission, June 1, 2001.
[xxx] Ronald Crites and George Tchobanogrous, *Small and Decentralized Management Systems.* New York: McGraw-Hill, 1998, p. 8.
[xxxi] Objective 3d (DEIR p. 2-7): Water Resources. Address water resource issues by mitigating the Project's impacts of saltwater intrusion. Furthermore, the wastewater project will maintain the widest possible options for beneficial reuse of treated effluent.

[xxxii] "Options should be kept open for future water purveyor participation." (Carollo Engineers August 2007; DEIR p. 7-9)

[xxxiii] *NWRI Final Report of the Independent Advisory Panel on Reviewing the San Luis Obispo LOWWP*, October 23, 2008, Dr. George Tchobanoglous, Chair, Finding 4.5.2.
[xxxiv] *Santa Lucian*, January 2009, p. 10.
[xxxv] *LOWWP DEIR* p. 7-64.
[xxxvi] *LOWWP DEIR*, Executive Summary 3.d. p. 2-7. Also see Urban Reuse p. 7-65 for another example of inadequate analysis of potential use of LID strategies.
[xxxvii] For information on Green Streets see http://www.lowimpactdevelopment.org/greenstreets/background.htm.
[xxxviii] *LOWWP DEIR* Appendix B – 7.1.1.
[xxxix] Jonathan Todd, President of John Todd Ecological Design, email correspondence with Mary Fullwood, Los Osos Representative of the San Luis Bay Chapter of the Surfrider Foundation, January 21, 2009.
[xl] *LOWWP DEIR* Appendix F – Liquefaction: "Very High. Groundwater has been encountered within about 10 feet of the ground surface, soil units previously encountered are loose and vulnerable to liquefaction, and/or manifestation of liquefaction was observed following the 2003 San Simeon earthquake." See Exhibit 5.4-1 – Broderson, all collection pipe within the PZ area to be sewered, all but 2 of 20 gravity pump and pocket pump stations, STEP tanks are in "Very High Potential Liquifaction Areas.

[xli] See *LOWWP DEIR* Appendix F – San Simeon Earthquake.
[xlii] David Sneed, "Earthquake fault discovered offshore of Diablo Canyon nuclear power plant", *Telegram Tribune*, November 21, 2008.
[xliii] See *LOWWP DEIR* Table 3-7, p. 3-51. Note 1.
[xliv] Larry Allen, Executive Director, SLO County Air Pollution Control District. Panel presentation, *Faith, the Environment and You* hosted by Congesswoman Lois Capps at First Presbyterian Church, San Luis Obisop, CA, August 6, 2008.
[xlv] See www.eosenvironmental.com
[xlvi] Ron Crites and George Tchobanoglous, *Small and Decentralized Wastewater Management Systems* (New York: McGraw-Hill, 1998), 369.
[xlvii] "The collection system for all Proposed Projects could result in indirect impacts to wetland ESHAs that occur in the immediate vicinity of proposed developments. Construction activities associated with the development and installation of collection system components could result in increased sedimentation and other adverse water quality impacts to adjacent wetlands. These impacts would be considered significant (5.5-35)."
[xlviii] "As you know, I do feel that any sewering is better then none. The fate of the bay depends on it. That said conventional gravity sewers are not the most cost effective or environmental solution for Los Osos. I believe that a small diameter pressure system will suit the community best." - Jonathan Todd, CEO, John Todd Ecological Design, Inc. Email correspondence with Dr. Mary Fullwood, August 7, 2008. Also see http://www.toddecological.com/
[xlix] For further elaboration on the tri-metrics of Sustainability see, for example, Assemblyman Sam Blakeslee, "Redefining the Rules and Roles of Environmental Politics", *Santa Lucian*, July/Aug. 2008 (p. 9). http://santalucia.sierraclub.org/lucian/lucian.html.
[l] California Department of Fish and Game. *Master Plan for Marine Protected Areas,* April 13, 2007 (p. 52).
[li] Alex Hinds, former SLO County Director of Planning and Building. *Resolution Supporting the Proposal of the Central Coast National Marine Sanctuary Designation.* Submitted to Joseph Uravitch, Chief, Marine and Estuarine Management Division, Office of Ocean and Coastal Resource Management, National Ocean Service/NOAA on December 24, 1990.
[lii] The United States Environmental Protection Agency (USEPA) estimates that there are at least 40,000 sewage overflows each year. (State of California Regional Water Quality Control Board Central Coast Region Staff Report for Special Meeting of November 19, 2004.)
[liii] Larry Allen, Executive Director, SLO County Air Pollution Control District. Panel presentation, *Faith, the Environment and You* hosted by Congesswoman Lois Capps at First Presbyterian Church, San Luis Obisop, CA, August 6, 2008.
[liv] Dana Ripley, Ripley Pacific Company. Personal communication with Dr. Mary Fullwood, August 29, 2008.
[lv] We would like the NWRI Independent Peer Review panel to address this issue and clarify the actual vulnerability of STEP systems at the point of connection and the tank.
[lvi] SLO County LOWWP Development. *Technical Memorandum: Flows and Loads*. Final Draft, February 2008, pp. 7 and 10.
[lvii]

http://www.slocounty.ca.gov/Assets/PW/LOWWP/document%2Blibrary/Dr.%2BT%24!27s%2Bcomments.pdf
[lviii] SLO County LOWWP Development. *Technical Memorandum: Flows and Loads*. Final Draft, February 2008, pp. 7 and 10.
[lix] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, p. 1-9. For instance, the Rocky Mountain Institute stated that in 2004 the maintenance cost of hydroflush cleaning services averaged $512 per mile hydroflushed per year and television inspection services

averaged $4,600 per mile TV-inspected per year. See *Valuing Decentralized Wastewater Technologies: A Catalogue of Benefits, Costs, and Economic Analysis Techniques*, 2004, p. 107.
[lx] Section 3.3, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007 states "over 45 miles of pipelines" will be required for the LOWWP.
[lxi] LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4. The Rocky Mountain Institute stated that in 2004 the maintenance cost of television inspection services averaged $4,600 per mile TV-inspected per year. See *Valuing Decentralized Wastewater Technologies: A Catalogue of Benefits, Costs, and Economic Analysis Techniques*, 2004, p. 107.
[lxii] Exfiltration pollutes ground water and surface water (e.g., seeps to bay), and is assumed to be a major cause of pollution and beach closures (see EPA Exfiltration and Beach Closure reports).
[lxiii] See Table 3.1, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007.
[lxiv] National Water Research Institute (NWRI) *Final Report of the Independent Advisory Panel on Reviewing the Los Osos Wastewater Management Plan Update*, December 4, 2006, Section 3.2.8, p. 5.
[lxv] State Water Resources Control Board Order No. 2006-0003, *State General Waste Discharge Requirements for Sanitary Sewer Systems*, May 2, 2006, p. 1.
[lxvi] Ibid.
[lxvii] See, for instance, Seacoast Utility Authority, Palm Beach County, Section IV – Sanitary Sewer System.
[lxviii] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, 1-11; and, SLO County LOWWP Development, *Technical Memorandum: Flows and Loads*. Final Draft, February 2008, p. 11.
[lxix] California Regional Water Quality Control Board Central Coast Region, *Staff Report for Special Meeting of November 19, 2004*, p. 1. SLB Surfrider's "Statement of Key Environmental Issues: LOWWP 7/17/07."
[lxx] Dana Ripley, Ripley Pacific Company. Personal communication with Dr. Mary Fullwood, August 17 and 19, 2008.
[lxxi] See Table 3.4, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007. This figure can be 100% if STEP tanks also go in the 25% of septic locations in backyards.
[lxxii] LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4.
[lxxiii] Rob Miller noted, "Where very deep trenching is required, the width depends heavily on the method of construction. There are costly ways to keep the trench impact narrow, but it requires specialized shoring equipment." Rob Miller, Principal Engineer, Wallace Group and Vice Chair, LOWWP Technical Advisory Committee. Personal communication with Dr. Mary Fullwood, August 11, 2008.
[lxxiv] See Table 3.1, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007.
[lxxv] This estimate is based on the contract estimate for the previously proposed conventional gravity midtown project which is now being considered in relation to alternative systems and locations.
[lxxvi] See Table 3.4, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007. This figure can be 100% if STEP tanks also go in the 25% of septic locations in backyards.
[lxxvii] Dana Ripley, Ripley Pacific Company. Personal communication with Dr. Mary Fullwood, September 1, 2008.
[lxxviii] Fred Collins, Administrator, Northern Chumash Tribal Council. Direct communication with Dr. Mary Fullwood, August 9, 2008.
[lxxix] Alex Hinds, former SLO County Director of Planning and Building. *Resolution Supporting the Proposal of the Central Coast National Marine Sanctuary Designation.* Submitted to Joseph

Uravitch, Chief, Marine and Estuarine Management Division, Office of Ocean and Coastal Resource Management, National Ocean Service/NOAA on December 24, 1990.

[lxxx] Fred Collins, Administrator, Northern Chumash Tribal Council. Direct communication with Dr. Mary Fullwood, August 9, 2008.

[lxxxi] Northern Chumash Tribal Council statement submitted to the SLO County Board of Supervisors and LOWWP Project Team, June 19, 2007.

[lxxxii] LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4.

[lxxxiii] Additional notes: Core drilling – do core drilling every 100ft to see at which depth is it safe to bore without encountering a site. When near a site, core every 20-50ft to be cautious. If four feet shows evidence of a site but at five feet hitting nothing than bore that section at 5', 10'. Gravity V-trenching, 8ft deep in sandy soil can easily be 25ft wide. Fred Collins, Administrator, Northern Chumash Tribal Council. Direct communication with Dr. Mary Fullwood, August 9, 2008.

[lxxxiv] Ronald Crites and George Tchobanogrous, *Small and Decentralized Management Systems.* New York: McGraw-Hill, 1998, p. 348; and, LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4.

[lxxxv] LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4. Section 3.3, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007 states "over 45 miles of pipelines" will be required for the LOWWP.

[lxxxvi] Fred Collins, Administrator, Northern Chumash Tribal Council. Direct communication with Dr. Mary Fullwood, August 9, 2008.

[lxxxvii] Ibid.

[lxxxviii] Ronald Crites and George Tchobanogrous, *Small and Decentralized Management Systems.* New York: McGraw-Hill, 1998, p. 348; and, LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4.

[lxxxix] Collins concluded, "NCTC is working on the Nacimiento Water Pipeline as Chumash Consultants and observing the accuracy of boring technologies and it is amazing, it is truly the way of the future. The Chumash Community has always stood on the principle of Chumash Site avoidance, always keep our sites in-place, undisturbed, because for us our Ancestors Energies are still present, as this is our truth. So for us that write words and make appearances for the protection of our ancient civilization, we who are the Guardians, would be very happy if this project would be conducted with our Spiritual Understanding in consideration, which will help with the destruction that we will have to face and endure. STEP System Boring allows for the least amount of soil displacement and is the best way to go." Fred Collins, Administrator, Northern Chumash Tribal Council. Direct communication with Dr. Mary Fullwood, August 9, 2008.

[xc] Larry Allen, Executive Director, SLO County Air Pollution Control District. Panel presentation, *Faith, the Environment and You* hosted by Congesswoman Lois Capps at First Presbyterian Church, San Luis Obisop, CA, August 6, 2008.

[xci] Dana Ripley, *Tech Memo #8: Energy Intensity of Collection and Treatment Alternatives*, Los Osos Wastewater Management Plan Update, July 24, 2006, p. 5.

[xcii] Ibid.

[xciii] Dana Ripley stated, "I am now assuming that 95% of effluent pumps will be ½ hp. There may be a few isolated instances where a ¾ hp or 1 hp pump may be needed for larger STEP tanks. Email correspondence with Dr. Mary Fullwood, August 19, 2008.

[xciv] National Water Research Institute (NWRI) *Final Report of the Independent Advisory Panel on Reviewing the Los Osos Wastewater Management Plan Update*, December 4, 2006, Section 3.2.7, p. 5.

[xcv] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, p. 5-4, Table 5.1; and, LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4.

[xcvi] Dana Ripley, CEO, Ripley Pacific Company. Email correspondence with Dr. Mary Fullwood, August 26, 2008.
[xcvii] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, pp., 3-25 & 3-26.
[xcviii] Ronald Crites and George Tchobanogrous, *Small and Decentralized Management Systems.* New York: McGraw-Hill, 1998, p. 8.
[xcix] Dana Ripley, CEO, Ripley Pacific Company. Email correspondence with Dr. Mary Fullwood, August 29, 2008.
[c] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007,1-9.
[ci] Ronald Crites and George Tchobanogrous, *Small and Decentralized Management Systems.* New York: McGraw-Hill, 1998, p. 8.
[cii] See http://www.wwdmag.com/Self-performed-Dewatering-Enhances-California-Sewer-Line-Project-article2339
[ciii] Larry Allen has stated, "20% of energy use in California is water pumping. Water conservation reduces pumping." Larry Allen, Executive Director, SLO County Air Pollution Control District. Panel presentation, *Faith, the Environment and You* hosted by Congesswoman Lois Capps at First Presbyterian Church, San Luis Obisop, CA, August 6, 2008.
[civ] Ronald Crites and George Tchobanogrous, *Small and Decentralized Management Systems.* New York: McGraw-Hill, 1998, p. 8.
[cv] "Summary for Policymakers." *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* Intergovernmental Panel on Climate Change (2007-02-05).
[cvi] Dana Ripley, Ripley Pacific Company. Email correspondence with Dr. Mary Fullwood, August 7, 2008.
[cvii] Bill Cagle, National Accounts, Orenco Systems Inc. Personal email correspondence, August 15, 2008.
[cviii] See www.eosenvironmental.com
[cix] Greg Dolan, Vice President, Methanol Institute. Exchange with Bill Cagle, National Accounts, Orenco Systems, Inc., July 7, 2008. See www.methanol.org
[cx] LOWWP Technical Memorandum, "Projects Alternatives Greenhouse Gas Emissions Inventory, June 2008, p. 14.
[cxi] John Kellerman, Plant Manager, California Men's Colony Wastewater Treatment Plant. Scheduled tour for SLB Surfrider and SL Sierra Club, March 7, 2008.
[cxii] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, p. 5-4, Table 5.1.
[cxiii] See Table 3.1, SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007.
[cxiv] http://www.sanluisobispo.com/news/local/story/260066.html
[cxv] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, p. 5-4, Table 5.1.
[cxvi] LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 3. Note: if conventional gravity is selected, we favor treatment Ponds over the other treatment options, e.g., Oxidation Ditch, MBR.
[cxvii] SLB Surfrider and SL Sierra Club CMC Sewer Tour lead by John Kellerman, Plant Manager, March 7, 2008.
[cxviii] LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4.
[cxix] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, pp. 3-8 and 3-9.

[cxx] LOWWP Technical Advisory Committee *Pro/Con Analysis on Project Component Alternatives*, August 6, 2007, p. 4. SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, p. 3-27.
[cxxi] Rob Miller, Principal Engineer, Wallace Group and Vice Chair, LOWWP Technical Advisory Committee. Personal communication with Dr. Mary Fullwood, August 8, 2008.
[cxxii] For further elaboration on the tri-metrics of Sustainability see, for example, Assemblyman Sam Blakeslee, "Redefining the Rules and Roles of Environmental Politics", *Santa Lucian*, July/Aug. 2008 (p. 9). http://santalucia.sierraclub.org/lucian/lucian.html.
[cxxiii] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, pp. 3-23 and 3-24, Tables 3.17 and 3.18, and, p. 7-8, Table 7.4.
[cxxiv] Jonathan Todd, CEO, John Todd Ecological Design, Inc. Email correspondence with Dr. Mary Fullwood, August 7, 2008.
[cxxv] For single family units, the grinder pumps would be 2 hp, for larger commercial properties, grinder pumps would be 5 hp and up. Dana Ripley, Ripley Pacific Company. Email correspondence with Dr. Mary Fullwood, August 25, 2008.
[cxxvi] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, p. 5-4, Table 5.1.
[cxxvii] See www.eosenvirnmental.com
[cxxviii] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, p. 1-9.
[cxxix] Ibid., p. 5-4, Table 5.1.
[cxxx] Larry Allen, Executive Director, SLO County Air Pollution Control District. Panel presentation, *Faith, the Environment and You* hosted by Congesswoman Lois Capps at First Presbyterian Church, San Luis Obisop, CA, August 6, 2008.
[cxxxi] SLO County LOWWP *Viable Project Alternatives Fine Screening Analysis* August 2007, pp. 3-23 and 3-24, Tables 3.17 and 3.18. Dana Ripley noted the STEP design for the LOWWP is 15-20% complete and believes the costs of a STEP/STEG system remain comparable to those listed in the 2006 LOCSD *Los Osos Wastewater Management Plan Update*, p. 9. Dana Ripley, Ripley Pacific Company. Email correspondence with Dr. Mary Fullwood, August 25, 2008.
[cxxxii] Fred Collins, Administrator, Northern Chumash Tribal Council statement submitted to the SLO County Board of Supervisors and LOWWP Project Team, June 19, 2007.

Surfrider Foundation - San Luis Bay Chapter, Jeff Pienak, January 30, 2009 (Letter P36)

Response to Comment P36-1

This comment states the Surfrider Foundation has provided additional comments on behalf of the organization. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P36-2

This comment was concerned that Section 4, Environmental Setting, of the Draft EIR did not discuss the Marine Protected Areas in the project vicinity. Section 4 in the Draft EIR provides a general setting within the project vicinity. Setting 4.2 includes a general setting discussion for each of the environmental issues that were evaluated in Section 5 of the Draft EIR and evaluated in detail in the Expanded Analyses that are located in the appendices. The Marine Protection Areas (i.e., Morro Bay State Marine Conservation Area and Morro Bay State Marine Reserve) are not located within the project study area as defined in Exhibit 3-3 in the Draft EIR.

This comment also expresses concern that the Draft EIR did not address potential short-term and long-term pollution issues related to the Marine Life Protection Act. The Morro Bay State Marine Reserve is the surface water body that the Marine Life Protection Act regulates. The proposed projects evaluated in the Draft EIR do not have proposed facilities that directly affect the Morro Bay State Marine Reserve. The short-term and long-term surface water quality impacts from the implementation of the proposed project are discussed in Section 5.3, Drainage and Surface Water Quality, in the Draft EIR and in Appendix E-1. In addition, Section 5.7, Public Health and Safety, in the Draft EIR and Appendix I-1 provide an analysis of potential accidental releases of untreated wastewater at stream crossings. These accidental releases could indirectly affect the Morro Bay State Marine Reserve; however, at this time, it is speculative regarding the level of impact because the location and size of the accidental spill would need to be known. Mitigation Measure 5.7.B.1 is recommended to reduce the potential impact of spills within open water areas to less than significant.

Response to Comment P36-3

This comment expresses a concern regarding the "take" of marine life. See Response to Comment P8-3.

Response to Comment P36-4

This comment expresses a request that sewage spills to the SMR be evaluated within Appendix F - 5.4.4. See Response to Comment P36-3. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P36-5

This comment expresses a concern about the quantity of soil disruption of a STEP system compared to a gravity system and requests a reevaluation of the amount of soil disturbance impacts. The comment also suggests numerous construction techniques that may be employed, in the view of the

writer, to lessen the amount of soil disturbed during construction. Replies to suggestions made in the comment follow:

- The first concern expressed was the amount of excavation for the typical STEP tank. The comment states a hole for the STEP tank would be 8'W x 14'L x 8'D and would be approximately 23 cubic yards. The actual calculated amount is 33.2 cubic yards (or, 50 percent more). This miscalculation skews the comment's assertion significantly and further validates the calculations in the Draft EIR.
- The comment states that septic tanks located in the front yards could be left in place and a new STEP tank placed in the back yard. This assertion is problematic because house sewage service typically goes direct to the septic tank, not to the back yard. Most houses that have septic tanks in the front yard and do not have sufficient space in the back yard for any kind of tank. The STEP tanks need to be in a public utility easement, normally adjacent to the street or public right-of-way for maintenance and other purposes (refer to comment A4-4, above). It is the responsibility of the homeowner to pay for the connection from the house to the tank. Placing the STEP tank in the back yard makes operation and maintenance of the system problematic because of access issues for the County or other public agency. The Fine Screening Report prepared by Carollo Engineers (incorporated by reference in the Draft EIR) contains an extensive analysis of STEP tank installation. The comment made by this letter is problematic and does not invalidate the analysis in the Draft EIR.
- The comment suggests trenching for pipelines would require removal of the soils excavated and re-importation of suitable fill to backfill the trenches. While exact details of construction methods are not known at this time (because the County is pursuing a design-build contract for the wastewater facilities) normal construction practices will not require the excavated material be removed. Typically, the soils in the Los Osos area are sandy soils and this is excellent material for trench backfill.

In sum, the analysis of soil excavation presented in the Draft EIR is sound and forms a defensible basis for comparison of various means of wastewater collection systems (either STEP, or gravity).

Response to Comment P36-6

This comment expresses a concern regarding the Draft EIR's claim that there is no substantial difference between the STEP/STEG system and the gravity system. See Topical Response 10, Infiltration, Inflow, and Exfiltration.

Response to Comment P36-7

This comment states that the economic benefits of septic tanks should be included in the alternative technologies analysis. All of the comparative cost estimates include consideration that a reduction in biosolids from STEP systems will result in less biosolids handling required at the treatment plant as well as a smaller cost and footprint for the secondary treatment component of the treatment plant

itself. However, a portion of the benefits of biosolids reduction results in higher operations and maintenance costs to collect the remaining biosolids from individual STEP tanks, and in the environmental costs of greenhouse gas generation as biosolids decompose in STEP tanks.

Response to Comment P36-8

This comment expresses a desire to reevaluate the impacts of the proposed system's impacts on cultural resources. We agree that STEP/STEG pipes could potentially be laid using directional drilling. Gravity pipes could also be laid using directional drilling if necessary. The difficulty with directional drilling is determining the depths to avoid cultural resources. Directional drilling does not necessarily avoid impacts to cultural resources, it only masks impacts because items are not seen.

One of the objectives of cultural resources management is preservation and when preservation is not feasible, retrieval of information is the goal. Use of directional drilling, unless careful excavation has occurred to document the depth and extent of a resources is no less impacting that excavation of a trench for traditional construction methods. See also Response to Comment A8-118 and P05-1.

The Far Western Report (Appendix H-2, pages 28-30) indicated that in the 2001-2005 work for the previous wastewater project a comprehensive program was undertaken to identify previous located cultural resources and in some instances to pre-excavate area with known cultural resources to avoid project delays. The program included a series of activities including a field survey of the facilities (the same facilities that will be used for the current project west of Los Osos Creek), the use of 128 geoprobes throughout the streets of Los Osos where the collection system would be laid and in some instances pre-excavations occurred to remove materials. Draft EIR Appendix H-2, Archaeological Survey Report, provides the following information:

> *As a result of the coring program, 126 probes were excavated, ranging in depth from 87 to 377 centimeters, with an average depth of 210 centimeters; deeper probes were used to gather data on dune geomorphology. In general, the probe strata showed road disturbance from the surface to 20 centimeters in depth, underlain by a variable strata of tan, weak sand and/or Baywood fine sand. Cultural deposit, consisting of darkened soil and or shell fragments, was encountered within eight of the 126 probes. All eight positive probes were found within Baywood Park.*
>
> *Between June 13 and July 1, 2005, Far Western focused hand excavations in two areas—Baywood Promontory and Sweet Springs. In three instances, asphalt was cut in the approximate location of the proposed sewer trench to undertake excavations, while one area was unpaved. A diverse array of material was recovered, representing many different time periods, dating back as far as 8,000 years ago. Isolated human remains were recovered in all locations, along with two complete burials. Project engineers worked successfully with Far Western and the Native American monitors to avoid impacts to both burials, and pre-emptive backhoe work was done in one area to clear the alternative route (Table 2).*

> *Backhoe test units were placed across the proposed "midtown" treatment location and Broderson effluent area, both with negative results. The backhoe was also used to check locations that prior study by Far Western and other researchers identified as having the potential for cultural deposits; in all cases, results were negative.*
>
> *Based on excavations and information from local property owners, site SLO-23, a large bay-side deposit* **[locational information removed***], is extremely sensitive for human remains; property owners note that several burials have been found on parcel* **[locational information removed]**. *This is the one site where potential project effects were not fully mitigated, and it has been recommended that additional hand excavations be undertaken, as well as pre-emptive backhoe excavations in less sensitive areas within the site.*

Based on this information and the fact that the locations of facilities would not be substantially different from the earlier project, there is not a likelihood that additional significant resources would be encountered. However, this same information cannot be extended to the placement of STEP tanks on individual parcels. The Far Western effort was confined to collection system and pump station impacts and not into the front yards of houses. By extrapolation, areas that contained resources during the 2001-2005 efforts may extend into yards.

You are correct in your assessment on page 5.6-13 with regard to gravity grinder pumps and pump stations associated with the STEP/STEG collection system.

The Draft EIR is modified to remove the following paragraph:

> ~~Pumps associated with the collection system, including grinder pumps and pump stations, will be constructed with a design/build alternative. These facilities will be placed in underground vaults, ranging from 10 to 12 feet in diameter and buried at depths of 10 to 20 feet below the existing ground surface. Depending upon location, some of these could have the potential to impact historic architectural resources. The impacts would be less than significant.~~

Response to Comment P36-9

This comment expresses the concern that venting in GHG calculations were only assigned to STEP/STEG. The Draft EIR describes venting as venting of septic tanks; therefore, emissions would only be related to the STEP design. Occasional venting from the gravity system would be considered negligible.

Response to Comment P36-10

This comment expresses a desire for the STEP/STEG and gravity collection system to be analyzed based on water conservation measures. The collection system operational issues described in the comment arise from situations where long runs of gravity collection pipes do not have sufficient flow to carry solids through the pipelines. In these instances, pressure sewers (STEP/Low Pressure) or

vacuum sewers appear to provide a solution to the problem. In Los Osos, the high density of development essentially guarantees sufficient flows to operate a gravity system, even when water flows are reduced due to conservation.

Un-Numbered Comment - Pump Station Impacts

The comment expresses the desire to have an analysis of the gravity collection system and pocket pump stations. The Draft EIR addresses all of the listed concerns in Section 5.5 and Appendix G (Biological Resources), Section 5.6 and Appendix H (Cultural Resources); Section 5.4 and Appendix F (Geology); and Section 5.7 and Appendix I (Public Health and Safety). Also see the responses to comments P36-13 (Sea Level Rise), A3-7 (Construction storm water impacts), P55-17 (Power supply at pocket pump stations) and Topical Response 10, Infiltration, Inflow, and Exfiltration, and Topical Response 12, Sewer System Management Plan. That the energy demands of the alternatives are fully described in tables 3.19 and 3.20 in the Fine Screening Report (August 2007).

Response to Comment P36-11

This comment states that unlike gravity, STEP/STEG collection systems are compatible with decentralized treatment, which is therefore more flexible considering uncertainties about the future. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P36-12

This comment expresses a concern regarding spills associated with wet weather flows if a gravity system is used. See Topical Response 10, Infiltration, Inflow, and Exfiltration.

Response to Comment P36-13

This comment expresses a concern regarding future sea levels due to climate changes. Depending on the increase, sea level rise will make the mandated Sewer System Management Plan an even more important on-going element of any project built in Los Osos. For gravity, the extra focus would be on pipes and facilities that are at the edge of the Bay as well as below sea level. For a STEP system, the extra focus would be on the STEP tanks that are also at the edge of the Bay and below sea level, given that the depth of the STEP tanks (8 feet or more) is similar to approximately 75 percent of the gravity collection system. See also Topical Response 12, Sewer System Management Plan.

Response to Comment P36-14

The comment describes a scenario of increasing water use rates which is not likely to occur given the experience in numerous jurisdictions with water conservation efforts, including Los Osos. The 160 acre foot decrease in water use is a conservative figure, based on the ability of the wastewater project to both mandate the conservation measures (bathroom retrofits) and a reasonable expectation of results. The project does not in any way prevent the community from achieving higher water use reductions through the development and implementation of more sophisticated, or more restrictive, mandatory conservation measures. Building the project, that is, collecting and treating wastewater at a central point will also provide the community a number of options for further treatment and reuse, which the community can develop in concert with the water purveyors.

See also Topical Response 3, Water Resources and the Project Scope; Topical Response 9, Water Conservation Measures; and the Response to Comment P36-10.

Response to Comment P36-15

This comment expresses support for the use of tertiary treatment to maximize reuse. See Topical Response 4, Tertiary Treatment.

Response to Comment P36-16

This comment expresses support for the use of tertiary treatment for wastewater reuse. See Topical Response 4, Tertiary Treatment.

Response to Comment P36-17

This comment expresses support for agricultural reuse. See Topical Response 4, Tertiary Treatment.

Response to Comment P36-18

This comment expresses concern that the Draft EIR does not quantify the current contribution of septic to groundwater recharge. Table 5.2-1: Current Basin Balance Conditions includes the septic flow for each of the aquifers. Review of this table should eliminate the concern expressed with regard to the current septic flow contribution. See Topical Response 3, Water Resources and the Project Scope.

Response to Comment P36-19

This comment expresses a concern regarding the project's reliance on the Broderson site. See Topical Response 8, The Broderson Leachfield.

Response to Comment P36-20

This comment expresses opposition with the identification of the Tonini site as the environmentally superior effluent disposal site. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P36-21

This comment suggests that if sprayfields are a component of the wastewater project, various opportunities for producing energy benefits from crops grown at the site should be evaluated. Because the project is focused on solving wastewater issues in the community, various potential additional uses of the disposal site have not been included in the project objectives, in order to ensure that the key goals of the project can be accomplished. Never-the-less, nothing in the project will prevent the community from continuing to explore and consider a range of possibilities once the project is successfully implemented. Implementation of additional actions related to the project itself will be dependent on the completion of the appropriate reviews and approvals, and securing of any necessary funding.

Response to Comment P36-22

This comment requested that a geotechnical report that addresses liquefaction hazards should be prepared prior to project approval. A Preliminary Geotechnical Report was prepared by Fugro West, Inc. in January 2009 to evaluate potential geotechnical impacts at the Tonini site (see Appendix Q.7). Based on subsurface exploration, there are liquefiable soils in the area of the proposed treatment facilities at Tonini. The liquefiable soils are shallow and would be replaced with properly compacted fill having a low potential of liquefaction. This replacement of soils at the proposed treatment plant facilities would reduce potential liquefaction impacts to less than significant. In addition, soils susceptible to seismic settlement underlying the proposed sprayfield areas will likely have minimal impact on the proposed project and the impact would be less than significant.

As stated in Impact 5.4-C in Appendix F-1, the depth to groundwater is greater than 100 feet below the existing ground surface at the Broderson leachfield and except for the near surface loose sand dune and deposits, the deeper soils encountered beneath the site is generally dense and not susceptible to liquefaction or seismic settlement. The near surface loose dune sand would not be considered potentially liquefiable because even in the event the near surface loose dune sand were saturated by precipitation or effluent disposal at the time of an earthquake, the groundwater depths would not rise near the ground surface at the Broderson site. Therefore, the proposed facilities at Broderson would not change the potential for liquefaction or seismic settlement to occur within the soils because of the effluent disposal system and estimated mounding at the Broderson site.

Also stated in Impact 5.4-C in Appendix F-1 as well as Impact 5.4-C in Section 5.4, Geology, in the Draft EIR, the proposed collection system (including pipelines and pump stations) may experience significant liquefaction impacts. Mitigation Measure 5.4-C1 is recommended to reduce this potential impact to less than significant.

Finally, see Response to Comment 36-2 regarding the potential impact on the Morro Bay State Marine Reserve.

Response to Comment P36-23

This comment asked which collection system could best withstand a large local earthquake. The proposed collection systems include gravity lines and a combination of gravity and pressure lines. Both systems have vulnerabilities and benefits. Pipelines in the two proposed collection systems could rupture in response to a strong earthquake because the network is complex and would subjected to all kinds of forces acting in different directions (shaking). The ground conditions and pipe depth both vary laterally and vertically, and the general complexity of a community-wide collection system would make it very difficult to provide a reliable comparison of these two systems seismic vulnerability.

This comment also asked about a new fault discovered offshore of the Diablo Canyon Nuclear Power Plant. An evaluation of the newly discovered fault is currently being conducted. If the results provide a basis for the fault to be included in the California Geologic Survey/US Geologic Survey's

database of recognized fault sources, the design of the proposed project structures will need to consider the new fault as well as other existing faults defined by the CGS/USGS as defined in the current building code.

Response to Comment P36-24

This comment expresses a concern regarding the economic sustainability of the proposed project. The County shares this commentor's concerns about project costs; the County is working diligently to address project funding issues since the inception of County work efforts in 2006. With respect to the specific issues listed:

Sewer laterals: for a gravity system, the cost of the lateral from the street to the property line is part of the project; the homeowner is responsible for on-lot improvements. For a STEP system, the homeowner is responsible for the costs of connecting the STEP tank to the house. These homeowner costs are identified in the Fine Screening Report (August 2007) and are clearly private improvement. However, disadvantaged persons assistance programs are intended to assist qualifying homeowners with these costs.

The cost of fusion welded pipes for a gravity system is provided in the Appendix to the Flows and Loads Technical Memorandum (November 2008).

The cost of properly dealing with cultural sites is reflected in the current range of cost estimates for each system.

All cost estimates reflect road repair requirements during construction. It should be noted that leak repair systems that do not require excavating gravity pipes are readily available, although on-going maintenance and repair costs are included in each project's overall operations and maintenance cost estimates, which are approximately 65 percent higher for a STEP collection system.

Many of the items listed in Appendix B, Project Description Data, and Draft EIR Project Description Section 3.4 are already included in costs estimates for both STEP and gravity. Others, such as using fusion welded pipe for gravity are discussed separately (Fine Screening Report Appendix). The remaining items are within the range of cost estimates for each alternative.

Response to Comment P36-25

This comment expresses a concern regarding the use of methanol for denitrification. Methanol is the most common chemical used to provide a carbon source for wastewater treatment systems that need to achieve both low nitrogen limits and have initial low levels of carbon in the influent. See Response to Comment A8-125.

Effluent used to irrigate agricultural crops would still require a level of denitrification, as wastewater effluent typically contains approximately twice the level of nitrogen that can be applied to agricultural

crops. If some denitrification is not accomplished prior to irrigation use, the excess can contaminate underlying groundwater.

Response to Comment P36-26

This comment expresses the concerns that for odors, the Draft EIR treated odors associated with STEP and gravity as relatively equivalent. The Draft EIR did recognize the difference in odors between the separate projects but all were categorized as less than significant and therefore relatively equivalent. See also Response to Comment A8-151.

Response to Comment P36-27

This comment expresses a concern regarding impacts on recreation due to project construction or project operation and maintenance. The proposed project would not result in an increased use of existing recreational facilities or require the expansion of recreational facilities. According to the County Bikeways Plan (updated 2005), Turri Road is not listed as an existing Class I or Class II bikeway. Additionally, Mitigation Measure 5.8-A1 is provided which states that prior to construction, a traffic management plan shall be prepared for review and approval by the County. This plan will address nearness of the work zone to traffic and other facilities, including bicycles and pedestrians. In addition, related to recreational activities associated with the Bay, the County requires a stormwater pollution prevention plan (SWPPP) and Erosion Prevention and Sediment Control Plan (EPSCP) for construction activities along the bay, which would result in less than significant impacts on recreational users of the bay. Routine operational activities would not affect recreational activities within the bay. If, however, there is an accidental spill it would be speculative, at this time, to determine the effect on recreational activities within the bay because it would depend on the level and location of the accident.

The project could result in potential temporary impacts related to spills. However, the proposed disposal capacity using estimates for the Tonini and Broderson sites is shown to adequately meet disposal capacity. If there were out of the ordinary events and additional short-term capacity was needed additional water could be disposed of at the Broderson site.

Response to Comment P36-28

The comment is concerned about the identification of wetlands under the Coastal Act. Response to Comment A7-10 provides detailed information on the definitions used for wetlands.

Response to Comment P36-29

This comment expresses the belief that STEP is the environmentally preferred collection system technology. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P36-30

This comment expresses opposition with the statement on soil disturbance made by TAC member David Dubbink during a meeting of the LOWWP Technical Advisory Committee estimating that

STEP and conventional gravity collection systems will displace an approximately equal amount of soil, and instead find that STEP/STEG will displace less soil. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P36-31

This comment states that the STEP collection system would disturb the least amount of soil and minimize impacts to cultural resources. Work conducted by Far Western in 2001-2005 (see Response to Comment A8-118, P05-1, and P36-8) suggests that many of the resources with the community of Los Osos have been already identified and effectively had materials recovered. The rationale for directional drilling as stated in your comment " determination of the extent will be made complicated by subsurface installation (horizontal boring), meaning damage to a site could occur for approximately 50 feet before evidence of damage is revealed." We agree with that statement and feel that horizontal boring may be an option once a significant resource is encountered and not as a standard practice. This approach could be done for a gravity system as well as a pressurized system. The areas of concern have already been identified by the Far Western studies and in many instances the materials have already been removed.

We disagree with your assessment of placing the STEP tanks in the locations of the existing septic systems. This, while it would create less soil disturbance than a new excavation would be infeasible from a logistics standpoint.

Your statements with regard to the "higher risk of impacts on archaeological resources" may not be completely accurate. "With deep and wide trenching, sites and burials could be uncovered within the entire 45+ miles of trenched roads for gravity collection pipe because Los Osos being a district with multiple Chumash village sites for thousands of years." There are two errors with this statement:

1. The need for deep and wide trenching would be limited and shoring techniques would be used to limit the width of trenches. Depths to cultural resources sites were in the just below the surface to the six feet range.
2. Far Western studies have identified locations of resources and these areas have been examined and in some instances excavations have already taken place.

The previous work from 2001-2005 has reduced the potential for impacts to additional cultural resources. The portions of the project east of Los Osos Creek have fewer archaeological resources and all of these resources will be avoided by design.

Response to Comment P36-32

This comment expresses a concern regarding the differences identified in the Fine Screening Analysis regarding energy consumption for the STEP/STEG and gravity collection system. The comment states that the STEP/STEG collection system would consume 68 percent less energy than the gravity collection system. Draft EIR Appendix K-1, Expanded Air Quality Analysis, discusses greenhouse

gas emission impacts associated with the proposed project. Review of this section should eliminate the concerns expresses with regard to energy usage.

Response to Comment P36-33

This comment states that because of its ability to operate with reduced flows, the STEP collection system stands out as the superior collection system to facilitate increased water conservation measures. Because there are no comments on the contents of the Draft EIR, no further response is required.

Response to Comment P36-34

This comment states that GHG emissions from STEP vs. gravity needs better explanation, especially with relation to methanol issues. Certain wastewater plants capture methane generated by anaerobic treatment process rather than releasing the gas into the air as had previously been the case. However, because aerobic processes do not generate methane which subsequently requires capture, have much less problematic odor issues, and are much more efficient at addressing nitrate issues, anaerobic treatment process were not considered. Regarding collection of methane from each of over 4,000 STEP tanks, this would require installation of a separate gas collection system throughout the community, along with units to provide a constant vacuum to that system. It is apparent that because no such system has ever been installed in a community the size of Los Osos that many logistical and operational questions have not been investigated. Given the unproven nature of this concept and considered the costs involved in installing a second plumbing system, it is not considered feasible. See also the Response to Comment A8-136.

Response to Comment P36-35

This comment states that the STEP collection system would be more effective towards composting biosolids. See Response to Comment P36-26 regarding the relative equivalence of each project with regards to odor.

Response to Comment P36-36

This comment states that the STEP collection system may have a higher potential for odor sources. See Response to Comment P36-26 regarding the relative equivalence of each project with regards to odor.

Response to Comment P36-37

This comment reflects upon the relative costs of gravity vs. STEP/STEG collection systems, without direct relationships to environmental impacts The projects cost are well described in the Fine Screening Report (August 2007) as referenced in the comment. Comments regarding potential cost savings from refinements to the STEP system by installing STEG tanks are well taken.

Public Comment on the Draft Environmental Impact Report, County of San Luis Obispo, Los Osos Wastewater Project (LOWWP)

Summary

It is universally acknowledged that approximately 50-60%of the population of the Los Osos Prohibition Zone (PZ) cannot afford the cost of the proposed Wastewater Treatment Project and may be displaced from their homes by the Project.

This economic-cleansing of the lower- and middle-income residents of the PZ is in contradiction to the Core Values expressed by the Board of Supervisors, ("an agency with jurisdiction over the project"), the County's Technical Advisory Committee (TAC), the LOCSD Board of Directors, and the Catholic Church.

The Environmental Justice section of the DEIR disregards the importance of economic factors and consistently presents a faulty interpretation and misapplication of the meaning and scope of the concept of Environmental Justice with statements such as the assertion that there are no "disproportionate share of environmental effects" on low-income residents, and, therefore, no impact in regard to Environmental Justice issues.

The present public comment discussion argues that CEQA Statutes and Guidelines, EPA Guidelines and related regulations and policies require a more thorough-going analysis and examination of economic and social factors than is currently offered in the DEIR.

Agreement About the Unaffordability of the Proposed LOWWP

P37-1

There area many official statements regarding the unaffordability of the LOWWP:

---"County Brochure #3: AFFORDABILITY" states: "There are no project options that combine to create an affordable project under guidelines established by the Environmental Protection Agency." (p.2)

---1987 EIR by SLO County, Section 8, pp. 11-14, discusses the great economic hardship to be faced by both lower- and middle-income residents of Los Osos.

---John Waddell, Project Engineer, said in a public forum that we are no longer looking for "what is affordable, but what is **least unaffordable**."

---"Los Osos Affordability: EPA Affordability by 2000 Census, Household Age Category," the County's own graph which was presented to both the RWQCB and the SLO Board of Supervisors, clearly illustrates that the "estimated monthly financial burden" of up to $250/month cannot be afforded by any age group in Los Osos (the most that can be afforded is $100/month).

---The TAC's "Adopted Core Values and Criteria" Brochure was changed from the draft to the final version. Both versions began: "Affordability of any project is one of the major concerns (and probably the most important) to the community." The draft version gave the real import of the introductory statement: "The Prohibition Zone residents who will be paying for the project are predominantly middle and lower income people, and a sizable monthly payment could become a major burden for them. **For some, any increase in their monthly cash outflow will be disastrous."**

---Letter from Gordon Hensley and Stan Gustafson (both later elected LOCSD Board members) to Governor Pete Wilson of California, June 11, 1997. The letter states, "The economic impact of this sewer will devastate our community. 50% if not more of this community may be forced to sell their homes and move because of the high cost of the sewer ["$145-200monthly]…Older residents will be at risk of having inadequate resources for daily living."

Core Values

Both the lead agency, other agencies, and the Catholic Church have expressed the Core Value of Affordability.:

The County of San Luis Obispo

As the lead agency in the LOWWP, the County seems to be acting inconsistently with its own mandate as stated in the DEIR, Appendix O, p5.13-8

P37-1
CONT

"Other Thresholds
……
"Would the Project
"(a) Conflict with any applicable environmental justice goals or policies of an agency with jurisdiction over the project?"

The answer appears to be Yes. The "Los Osos Wastewater Project Studies Update (April 24, 2007) to the SLO Board of Supervisors stated:

"Financial Working Group Core Values
"—Community socio-economic well-being and diversity. **Nobody should have to leave their home to pay for a sewer."** (p28)

Additionally, the Board of Supervisors' Mission Statement (from their website) states:

"The San Luis Obispo Board of Supervisors, the legislative arm of the County Government, is committed to the implementation of such policies and the provision of such services that will enhance the economic, environmental and social quality of life in San Luis Obispo County."

These goals and policies are not reflected in the DEIR.

The Los Osos Board of Directors

LOCSD Resolution 2007-26 states:

" (3) The County of San Luis Obispo is hereby urged to support the development of financial options for the impacted Prohibition Zone homeowners of Los Osos for the purpose of maintaining the existing social and economic stability currently found within the community of Los Osos by precluding the need for residents to sell their homes because of an inability to play the admittedly high cost of the Los Osos Wastewater Project.
"(4) The County of San Luis Obispo is hereby urged to create, enable and support a Los Osos Financial Task Force or similar entity to assist low income residents within Los Osos."

Such a Financial Task force has not been instituted by the County.

Catholic Church

"Joint Statement Concerning the Los Osos Sewer Issue—Issued by the Diocese of Monterey and St. Elizabeth Parish Council (2/6/05)
"But, our greatest concern is with the social justice issue based on the proposed cost. We oppose the expense of such a project because we feel it places an unfair financial burden on the people of Los Osos living within its assessment district, owners and renters alike. We understand the current project will cost each household approximately $200 per month to finance the building of the plant and operate it."

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CONT

CEQA Statutes and Guidelines

The following CEQA Statutes and Guidelines refer to the importance and legal necessity for the EIR to consider economic and social issues as part of it's environmental review.

CEQA Statute 21083 (b)(3):

"21083. OFFICE OF PLANNING AND RESEARCH; preparation, development and review of Guidelines.
(a) The guidelines shall specifically include criteria for public agencies to follow in determining whether or not a proposed project may have a "significant effect on the environment." The criteria shall require a finding that a project may have a "significant effect on the environment" if one or more of the following conditions exist:
.....
"(3) The environmental effects of a project will cause SUBSTANTIAL ADVERSE EFFECTS ON HUMAN BEINGS, EITHER DIRECTLY OR INDIRECTLY." [emphasis is mine]

CEQA Guideline 15131:

(b) Economic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant. As an additional example, if the construction of a road and the resulting increase in noise in an area disturbed existing religious practices in the area, the disturbance of the religious practices could be used to determine that the construction and use of the road and the resulting noise would be significant effects on the environment. The religious practices would need to be analyzed only to the extent to show that the increase in traffic and noise would conflict with the religious practices. Where an EIR uses economic or social effects to determinate that a physical change is significant, the EIR shall explain the reason for determining that the effect is significant.

"(c) Economic, social, AND PARTICULARLY HOUSING FACTORS [emphasis mine] shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR."

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CONT

"Discussion: ....
"Despite the implication of these sections, CEQA does not focus exclusively on physical changed, and is not exclusively physical in concern. For example, in Section 21083 (c), CEQA requires an agency to determine that a project may have a significant effect on the environment if it will cause substantial adverse effects on human beings, either directly or indirectly. This section was added to CEQA by the same bill in 1972 (AB889, Chapter 1154 of the Statutes of 1972)that added the definition of the term 'environmental' and the term 'project'"
.....
"In Citizens Association for Sensible Development of Bishop Area v. Inyo (1985) 172 Cal. App.3d 151, the court held that "economic or social change may be used to determine that a physical change shall be regarded as a significant effect of the environment...(Economic and social effects of a physical change may be used to determine that the physical change is a significant effect on the environment." In this case, the Court held that an EIR for a proposed shopping center located away from the downtown shopping area must discuss the potential economic and social consequences of the project, if the proposed center would take

business away from the downtown and thereby cause business closures and eventual physical deterioration of the downtown."

CEQA Statute 21061.1

"21061.1 Feasibility
"'Feasibility' means capable of being accomplished in a successful manner within a reasonable period of time taking into account economic, environmental, social and technological factors."

CEQA Guideline 15126.6

"15126.6
"(f)(1) 'Feasibility'. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability..."

CEQA Guideline 15382

"15382 Significant Effect on Environment
"...An economic or social change by itself shall not be considered a significant effect on the environment. A SOCIAL AND ECONOMIC CHANGE RELATD TO A PHYSICAL CHANGE MAY BE CONSIDERED IN DETERMINING WHETHER THE
PHYSICAL CHANGE IS SIGNIFICANT [emphasis mine]"

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CONT

CEQA Guideline 15358

""15358 Effects
"Effects include:
.....
"(2)...Indirect or secondary effects may include growth inducing effects or other effects related to induced changes in the pattern of land use, population density, or growth rate..."

CEQA Guideline 15126.2

""15126.2 Consideration and Discussion of Significant Environmental Impacts
"(a) ...The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to the ecological systems, AND CHANGES INDUCED N POPULATION DISTRIBUTION, POPULATION CONCENTRATION, THE HUMAN USE OF LAND (INCLUDING

COMMERCIAL AND RESIDENTIAL DEVELOPMENT...)"

THE DRAFT ENVIRONMENTAL IMPACT REPORT

The DEIR includes statements that confirm the redirection of the document from the purely physical towards more human-centered considerations:

Appendix O, p.5.13.2-3:
"An environmental injustice exists when 'members of disadvantaged, ethnic, minority or other groups suffer disproportionately at the local, regional sub-national), or national levels from environmental risks or hazards, and/or suffer disproportionately from violations of FUNDAMENTAL HUMAN RIGHTS [emphasis mine] as a result of environmental factors.'"

The disproportionate burden is borne by those in the Prohibition Zone (PZ), who are paying excessive costs in regard to cleaning up the aquifer that is shared by those in the Los Osos Community who live outside the PZ.

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CONT

The proposed LOWWPis made unnecessarily unaffordable when the County adds General Benefit goals onto the financial backs of the property owners of the PZ, who agreed in a recent Proposition 218 vote to pay only for their special benefit. But in addition to the special benefit of "compliance with the Water Discharge Requirement of the RWQCB" (p.1-10 and 2-2), the residents of the PZ will also pay for the community-wide General Benefit goal "to solve the Level 3 water resource shortage and groundwater pollution" (Appendix O p.5.13-7) and "Alleviate groundwater contamination, primarily nitrates, which have occurred by the use of septic systems THROUGHOUT THE COMMUNTY OF LOS OSOS.(emphasis
mine) (p.1-10 and 2-2)."

This is clearly an example of an "inequitable environmental burden borne by groups such as low income and minority populations (Appendix O, p.5.13-2)."

Internal Contradiction in the DEIR

In Appendix O, there appears to be a contradiction between 5.13.4 (Thresholds of Significance) and a statement on page 5.13-3:

"5.13.4 Threshold of Significance
"This project will have a significant adverse environmental justice impact if it will:
"Result in adverse effects of impacts that are appreciably more severe in magnitude or are predominately borne by any segment of the population, for example, household population with low income or a minority population in comparison with a population that is not low income or minority."

But this Threshold of Significance seems to have been met by low income families on page a5.13-3:

" The financial investment required bay the various families within the Prohibition Zone will have different economic effects because there will be a greater effect on low-income families compared with moderate and high-income families"

This is immediately followed by the now contradictory concept that "Although there may be a disproportionate financial effort on low-income families, the financial effect is not considered an environmental effect and, thus, cannot be considered an economic justice issue."

Miscellaneous Affordability Issues

The Porter-Cologne Act. Section 13241, states:

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CONT

"13241…
"Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily limited to, all of the following:
…
"(d)economic considerations."

Economic considerations have not been adequately considered for the LOWWP by the RWQCB or the County.

The Public Utilities Code Section 12842 only allows 20 % of the assessed value of Los Osos, in the aggregate, to be spent on a public utility. With decreased values in the current market, some have placed this 20% maximum as low as $194,000,000. If this is true, the LOWWP cannot cost more than this, perhaps including money already spent (land acquisition, Ripley's design and consultation, etc.)

Lack of Affordable Project Options

Also increasing the cost of the Project is the limited kinds of options considered in the DEIR. Certain reasonable and potentially less expensive options such as low pressure and vacuum collection systems have been dismissed without sufficient justification and with a lack of analysis. This is in contradiction to CEQA Guideline 15004 (b)(2) and 15126.6:

Conclusion

It is essential both ethically and legally to consider the human factor in the EIR, and to analyze the economic and social effects that the LOWWP will have on the citizens of Los Osos. Lack of affordability is a fatal flaw in the entire Project, and both Environmental Justice and human decency demand a closer and clearer review of the issue.

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CONT

Bo Barry Cooper
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January 30, 2009

Bo Barry Cooper, January 30, 2009 (Letter P37)

Response to Comment P37-1

This comment expresses a concern regarding the affordability of the proposed project. See Topical Response 2, Project Costs, regarding the overall cost of the project.

Public Comment on the Draft Environmental Impact Report, County of San Luis Obispo, Los Osos Wastewater Project (LOWWP).

My comments will focus on the size and capacity of the LOWWP.

The Draft Environmental Impact Report (DEIR) states that the Los Osos Wastewater Project will be sized for buildout of the Assessment District---the Prohibition Zone. (DEIR---Executive Summary, p. 2-23, Sec. 2.6.2 Project Funding ..."engineering reports and associated cost estimates for the overall project are based on ultimate buildout of the Assessment District...including both the developed and undeveloped properties."

The LOWWP is estimated to cost $165 million (stated by Public Works staff, John Diodati in a pie-chart at a County Town Hall Meeting, Nov. 19, 2008). The DEIR estimates a range from $144 million-$188 million (Project Description, Cost and Funding, p. 3-65 & 3-66).

SLO County actually has access to $127 million from the first Proposition 218 Assessment of the property owners in the Prohibition Zone (PZ). Another $27 million will be assessed on the undeveloped properties by a future Prop. 218 vote. $11 million has been added as a $10 per month Capital Cost on the developed properties (Total: $165 million). It is unclear whether another Prop. 218 vote of the PZ property owners will be required to raise that additional $11 million. My question is: If needed, how will this $11 million be raised? P38-1

The issue of funds for the LOWWP is significant to the DEIR because, at the very least, the assessment for BOTH the developed and undeveloped properties in the Prohibition Zone MUST be in place in order to approve the scope of this project as described in the DEIR. Prop. 218 states, in part, that..."the amount of any (contested) assessment is proportional to, and no greater than, the benefits conferred on the property or properties in question." [CA Constitution, Article 13D (Assessment and Property-Related Fee Reform), Sec. 4 (f)].

My understanding of this passage in Prop. 218 leads me to believe that the SLO County Works Dept. cannot size the LOWWP to accommodate total buildout (as is their stated intention in the DEIR) without assessment monies from a second affirmative Prop. 218 vote on the undeveloped properties. According to the County's own consulting engineer, even after SLO County develops a plan with the Los Osos water purveyors (which is independent of the LOWWP), there will only be access to enough water from the upper and lower aquifers combined to meet the needs of the CURRENT population of the Assessment District (Prohibition Zone). At this time, there is NO potable water supply that can be guaranteed for the undeveloped properties in the PZ. Thus, a Prop. 218 for these property owners is unlikely to occur in the near future (if a vote were held under

these circumstances, it would probably be unsuccessful). The Prop. 218 assessment of the undeveloped properties would account for $27 million of the total project cost. Furthermore, even if the entire LOWWP cost only $127 million or less at buildout, under Prop. 218, the County could not use that money for a project designed to cover buildout scope and capacity. In this case, the assessment would also exceed the benefit to the developed properties.

Simply put, the SLO County Public Works Department does not have the assessment money to build the LOWWP as designed for buildout. Most importantly, the County cannot legitimately hold a Prop. 218 assessment vote for undeveloped properties in the PZ without a guaranteed water supply for those property owners. P38-1 CONT

It is significant to the proposed LOWWP in the DEIR that SLO County cannot require the developed property owners in the PZ to pay for an LOWWP designed for buildout capacity, nor can or should they approve a project of this scope BEFORE a second Prop. 218 vote and an adequate water supply for these undeveloped properties is in place.

Please address the serious issues raised in this document which could have a significant impact on the scope and capacity of the LOWWP as described in the DEIR.

Additional References: (in the DEIR)
1. Alternatives to Proposed Project, "Fine Screening Report", p. 7-9 ..."For instance, treated effluent conveyance pipelines should be sized to serve the build-out population..."

2. Growth Inducing Impacts, Sec. 6 "Growth Inducing Impacts", p. 6-1, 6-2, 6-3..."the growth that the LOWWP would accommodate includes approximately 18,428 persons."

3. E-mail correspondence from John Diodati explaining the LOWWP monthly costs (12/10/08 & 12/15/08).

I look forward to the County's response to my questions and concerns.

Lacey Cooper,
Los Osos PZ Homeowner

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Los Osos PZ Homeowner, Lacey Cooper, January 30, 2009 (Letter P38)

Response to Comment P38-1

This comment is concerned with the costs associated with the project and impacts to homeowners. See Topical Response 1, The Proposition 218 Election, and Topical Response 2, Project Costs.

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January 30, 2009

VIA ELECTRONIC MAIL

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Environmental Programs Manager
San Luis Obispo County Dept. of Public Works
County Government Center, Room 207
San Luis Obispo, CA 93408

RE: Comments to Draft Environmental Impact Report for the San Luis Obispo County Los Osos Wastewater Project

Dear Mr. Hutchinson:

Golden State Water Company (GSWC) has reviewed the Draft Environmental Impact Report for the County of San Luis Obispo Los Osos Wastewater Project, State Clearinghouse No. 2007121034 (DEIR), and provides the following comments. GSWC voices these comments to resolve concerns with the County of San Luis Obispo (County) to ensure proper water management in the Los Osos Groundwater Basin (Basin). GSWC believes that resolution of Basin issues will be in the community's best interest. Specifically, the intent of these comments is to ensure the valuable water resources in the Basin are used in a manner that supports its long-term sustainability and provide a safe, high quality water supply. GSWC welcomes the opportunity to work with the County and other interested parties in an effort to resolve these concerns and to continue moving forward on a basin-wide solution for proper water management in the Los Osos community. These comments are submitted to ensure that agency decision-makers comply with the provisions of the California Environmental Quality Act (Pub. Res. Code §§ 21000, *et seq.,* "CEQA") and its Guidelines (Title 14, CA Code Regs. §§ 15000, *et seq*., "CEQA Guidelines") and applicable case law.

The Environmental Impact Report (EIR) is the "heart of CEQA." *Laurel Heights Improvements Ass'n v. Regents of University of California* (1988) 47 Cal.3d 376, 392. It is an environmental "alarm bell" whose purpose is to alert the public and its responsible officials to environmental changes before they result in ecological consequences. Because the EIR must be certified or rejected by public officials, it is a document of accountability. *Id.* (citations omitted).

Notwithstanding that the County has made what we believe to be significant, good-faith efforts on the wastewater project, the Los Osos community will face severe water supply impacts if proper water reuse alternatives are not adequately analyzed and implemented. The DEIR

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deficiencies set forth in this letter frustrate meaningful public review of the Project to ensure that Los Osos' water supply is protected. The comments below are truly intended to assist the County with remedying the DEIR's deficiencies through the completion of the environmental review process in compliance with CEQA, and we hope that the County will accept our comments in that light. P39-1 CONT

1. General Concerns with the CEQA Process

(a) Project Definition

CEQA defines an EIR as primarily "an informational document." Pub. Res. Code § 21061. Its main purpose is to "inform public agency decision makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effect, and describe reasonable alternatives to the project." Guidelines § 15121(a). CEQA Guidelines define "project" as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." *Id.* § 15378(a).

A clear and comprehensive description of the project being proposed for approval is critical for a meaningful public review. A project description that omits integral components of the project may result in an EIR that fails to disclose all of the impacts of the project. *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 829-830; *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1450-1453. While extensive detail is unnecessary, an EIR is required to describe a project with sufficient detail and accuracy to permit informed decision-making. (CEQA Guidelines § 15124.) As explained below, the DEIR does not meet this basic threshold. P39-2

The DEIR adopts a project description that permits the County to address certain limited goals to achieve rather than addressing impacts attributable to the actions it is taking. The County defines the primary purpose of the DEIR as being development of infrastructure for wastewater collection, treatment, and disposal to serve Los Osos in the designated Prohibition Zone. The County identifies the Project's two primary *benefits* as: (1) compliance with the Waste Discharge Requirements (WDR) of the Regional Water Quality Control Board (RWQCB); and (2) alleviating groundwater contamination, primarily nitrates, which has occurred by the use of septic systems throughout Los Osos. (DEIR, p. 1-10.) The DEIR then points out that another important consideration of the Project involves water resource issues related to seawater intrusion contaminating the Basin. Specifically, the County states that "while the purpose of the Los Osos Wastewater Project (LOWWP) is to develop a community wastewater system, implementation measures for effluent disposal can enhance the opportunities for the water purveyors to improve the local water resources." (DEIR, p. 1-10.)

Throughout the DEIR the County claims that the Project description is limited by Assembly Bill 2701.[1] See 7-16 of the DEIR where the County states:

> Level B alternatives provide project benefits that are not necessary to meet the current project goal, which is to treat the Los Osos community wastewater in order to alleviate groundwater contamination and to mitigate the LOWWP's potential impact on seawater intrusion into the groundwater aquifer. Consequently, Level B alternatives are outside the scope of authority transferred to the County by AB 2701. Although the Level B alternatives were not carried forward into the proposed projects, in the future, other agencies such as the water purveyors, could pursue the Level B alternatives as separate projects.

The proper scope of the County's actions needs to include all the impacts to the Los Osos area from changing the sewage disposal and treatment process in the community. The County claims that flow from the existing individual residential septic tanks currently mitigates seawater intrusion by approximately 90 acre-feet per year (AFY). The DEIR clearly states that diverting these effluent discharges elsewhere could increase seawater intrusion by 90 AFY to a total of 550 AFY. (DEIR, p. 7-59.)

Before the County's actions, under present conditions, 1,267 AFY remains in the Basin from septic tank recharge. (See DEIR, Appendix D, Hopkins Preliminary Hydrogeological Impacts Study, pp. 24-26.) After the County implements the Project, that action will result in the vast majority of the septic tank recharge being exported out of the Basin. The exported water provides no groundwater recharge benefit to the Basin. All four proposed Projects include disposal of 1,290 AFY (estimated) of projected treated effluent based on the wastewater generated by the buildout population and estimated wet weather infiltration into the collection system. This treated effluent flow projection also assumes that the County implements water conservation measures. The operation of the LOWWP will result in removing approximately 842 AFY from the Basin and leaving in the Basin 448 AFY. (DEIR, pp. 2-11-2-12.) P39-3

Additionally, the LOWWP will dramatically change the way recharge operations occur within the Basin. Under current conditions, recharge occurs from septic recharge which is relatively dispersed compared to what is planned under the Project. Under the Project, recharge from reclaimed water in the Basin will occur at one location—the Broderson site. There are both

[1] "Assembly Bill (AB) 2701 was proposed to authorize transfer of wastewater authority from the LOCSD to the County of San Luis Obispo to proceed with implementation of a project to build a wastewater collection and treatment system for the Los Osos community. AB 2701 was passed unanimously and signed into law by Governor Arnold Schwarzenegger effective January 1, 2007. In accordance with the project goals and objectives and the limited authority granted by AB 2701, the project team focused on Level 2 effluent disposal alternatives that would achieve the maximum benefits to reduce seawater intrusion without water purveyor participation." (DEIR, pp. 1-8, 1-9, and 7-60.)

water quantity and quality implications from the Broderson site operations which need to be included in the impact analysis of the Project not presently included in the DEIR.

The scope of the County's review should be on the action of building and operating the LOWWP which results in removing water from, and modifying recharge patterns in, the Basin. The replacement of the septic systems with the LOWWP and its operations is the underlying action. However, throughout the DEIR the County elects to address certain limited goals or project *benefits* (e.g., meeting the RWQCB requirements and alleviating certain limited groundwater quality issues). The County treats these two goals as the only requirements that it must fully address in the DEIR. The DEIR does identify impacts to the groundwater levels as a secondary impact. The County identifies that there will be impacts to groundwater levels due to seawater intrusion. However, it then claims that those impacts are mitigated or additional opportunities exist for other agencies, such as water purveyors, to address those impacts. See page 7-16 of the DEIR which states: "Additional treatment would be required in order to reuse the treated effluent for agricultural or urban purposes; however, providing this higher level of treatment is not necessary, and is not part of the Proposed Project. Los Osos area water purveyors may want to pursue this option in the future to enhance the local water supply."

Regardless of the goals that the County and AB 2701 have established or the requirements of the RWQCB, the County must address all impacts of its actions. The DEIR stops short with much of the impact analysis throughout the DEIR by claiming it is outside the goals of the Project either set by AB 2701 or the County in its prescreening process. This is not a proper analysis under CEQA. The lead agency must identify all the impacts caused by its action first, then provide a meaningful analysis of their mitigation. P39-3 CONT

Meeting the requirements imposed by the RWQCB and addressing groundwater contamination are requirements of the project, but not the action itself. The County's action of removing the septic tanks will cause significant impacts. See page 27 of Hopkins Preliminary Hydrogeological Impacts Study, Appendix D, which states that removal of the septic system percolation return flows will create a hydrologic imbalance in the groundwater system if not properly mitigated. This impact needs to be fully analyzed in the DEIR and not simply conducted outside the DEIR or passed over as a secondary goal which other parties may fully address at a later date.

CEQA defines a project differently than the approach taken by the County. CEQA, defines "project" broadly, as an *activity.* Public Resources Code section 21065 defines a "project" as "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change." It does not state that a "project" is every single permutation of a development down to the last shrub or window. Thus, courts have opined, based on the breadth of the statutory definition, that a "project" is the "*whole of an action* which has a potential for resulting in a physical change in the environment, directly or ultimately, and includes the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies." *Burbank-Glendale-Pasadena Airport Authority* (1991)

233 Cal.App.3d 577, 592, emphasis added; *County of Orange v. Superior County* (2003) 113 Cal.App.4th 1, 9. P39-3 CONT

(b) The DEIR Fails to Develop and Maintain a Constant Project Description

Of concern is that the DEIR fails to develop and maintain a constant project description. An accurate, stable, and finite project description is the *sine qua non* of CEQA. (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192-193.) Under CEQA, a "project" is generally defined as the whole of an action having the potential to result in either a direct or reasonably foreseeable indirect physical change in the environment. (CEQA Guidelines § 15378(a).)

CEQA requires a stable and accurate project description, and the DEIR fails to provide one. "This EIR presents a detailed environmental analysis of four preliminary Proposed Project Alternatives on an equal basis. The preferred LOWWP Alternative selected could be any one of the four alternatives or an alternative combination of project components." (DEIR, p. 1-10.)

The DEIR does not select a proposed project, opting instead to examine several alternatives. This approach does not provide the public with an opportunity to provide meaningful comment on the Project because the final Project could be a combination of the alternatives that is completely different from that which was circulated in the DEIR: P39-4

> "The four projects identified in the table above and discussed below represent a discrete combination of treatment plant sites, collection system types, wastewater conveyance system schemes, and effluent storage and disposal techniques. They form the basis for analysis in this Draft EIR. However, it is possible that any combination of these elements may be used for the County's preferred alternative identified through this Draft EIR process and for the County to make findings that support the final project decision" (DEIR, p. 2-8).

An agency cannot simply release a draft report "that hedges on important environmental issues while deferring a more detailed analysis to the final [EIR] that is insulated from public review." *Mountain Lion Coalition v. California Fish and Game Comm'n* (1989) 214 Cal.App.3d 1043, 1052.

(c) The DEIR Fails to Properly Address Groundwater Issues That Have Potentially Significant Impacts

The fundamental purpose of an EIR is to provide public agencies and the public with detailed information about the effect a proposed project is likely to have on the environment, to list ways in which the significant effects of a project may be minimized, and to identify alternatives to the project. (Pub. Res. Code § 21061.) These public disclosure requirements require the DEIR to "focus the discussion in the environmental impact report on those potential effects on the P39-5

environment of a proposed project which the lead agency has determined are or may be significant." (Pub. Res. Code § 21002.1(e).) As discussed below, the DEIR does not adequately analyze the potential impacts of the alternatives it identifies and substantial evidence does not support the DEIR's conclusions about those alternatives.

In the DEIR the County claims there are no potentially significant impacts on groundwater quality and water supply. (DEIR, pp. 1-15, 2-25, and 2-27.) Because of this determination these areas are not fully studied in the DEIR.

> Throughout this Draft EIR, only impacts that were found to be Potentially Significant are discussed. Findings of Less Than Significant or No Impacts for each area of study are not studied further (DEIR, p. 2-25.).

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CONT

The following CEQA Guidelines are to be used in determining whether impacts to water supply and groundwater quality are significant, if the Project:

(a) substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)

(b) otherwise substantially degrades groundwater quality.

It is unclear from the DEIR if the LOWWP will deplete groundwater supplies or interfere substantially with groundwater recharge. Also, the analysis is insufficient to determine the impacts to groundwater quality. These matters are unclear as the analysis is not fully conducted in the DEIR; however, based on the information provided in the DEIR it is apparent that there are potential substantial impacts to both groundwater supply and quality.

The conclusions in the DEIR are contradictory to the facts provided; the DEIR does not support that there are potentially no impacts to groundwater resources, and shields from the public the needed analysis to determine if the mitigation measures really can protect Los Osos' water supply. It is clearly acknowledged by the County that the removal of the septic tank return flows will cause an imbalance in the Basin. (DEIR, pp. 2-11, 2-12; DEIR, Appendix, pp. D 5.2-26-27; DEIR, Appendix D, Hopkins Preliminary Hydrogeological Impacts Study, pp. 27, 30-33.) The County does make efforts to mitigate impacts to groundwater levels caused by the removal of the vast majority of the septic return flows from the Basin. However, since the County determines these mitigation measures solve the problem of significant impacts to groundwater resources, these impacts are not analyzed in the DEIR. Essentially the County removes one of the most critical areas of analysis from the DEIR by claiming the impacts are already adequately addressed by mitigation measures. Once the County identifies that there will be potentially significant impacts from the Project, it must address those impacts fully in the DEIR so the

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public can determine if the mitigation measures the County claims are sufficient to offset those impacts truly are sufficient. The problem with the DEIR as written is not that the County does not plan to mitigate the impacts, because it does plan to do so, but that the DEIR does not include sufficient analysis for the public and decision makers to determine whether those mitigation measures will be sufficient regardless of the County's intent.

Additionally, the County's findings that there are no potential significant impacts to groundwater resources are based on assumptions not properly examined. Three assumptions are provided below as an example. These concern the County's attempt to address the impact from seawater intrusion from the removal of the septic tank return flows and the reuse component of the Project.

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CONT

First, the County assumes that 160 AFY of conservation measures can be achieved. A fundamental assumption throughout the DEIR is that conservation will occur and the County will be able to achieve 160 AFY (DEIR, p. 2-13). This amount is based on a 10% reduction; no analysis has gone into whether this is possible or what the current rate of conservation is. Additionally, the County claims the conservation will result in roughly 90 AFY of seawater intrusion mitigation. This, however, does not account for where in the Basin the conservation is taking place; rather, the County applies a uniform mitigation factor to this conservation. This assumption is not realistic because mitigation associated with conservation is highly contingent on the location of the reduction of the pumping. If the majority of the conservation occurs in wells in the eastern part of the Basin, this would result in a much lower seawater intrusion factor than if the conservation occurred in the western part of the Basin. Lastly, it is also unclear how the conservation measures will be generated and implemented.

A second critical assumption is made in the DEIR regarding impacts to groundwater resources and the change in recharge operations in the Basin. Under the Project, the source of recharge is shifted from several individual septic tanks to one location at the Broderson site. There is no analysis of impacts to groundwater production quality due to this shift in recharge operations. The DEIR clearly identifies the need to monitor impacts from the operation at the Broderson site (DEIR, Appendix D, Preliminary Hydrogeological Impacts Study, pp. 30-33), but there is no clear plan implementing these procedures to ensure water quality around the Broderson site. The DEIR is devoid of any analysis on production impacts to potable water wells in the area.

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There are many questions to be addressed by the Broderson site operation. The impacts of concentrating the recharge at Broderson must be more thoroughly examined. Also, there needs to be a discussion of the operations plan at Broderson, so that the public can understand exactly how much water would be recharged and exported and under what circumstances. A better analysis needs to be conducted on the possible "asymmetrical disposal approach" at Broderson, which creates the ability of exporting much more water in the dry months. The possible impacts of concentrating nonregulated contaminants at Broderson needs to be explored. A possible solution for many of these concerns would be to plan for an incremental pilot project with monitoring oversight, rather than simply implementing full discharges immediately. However, if

a pilot project is selected, then a detailed analysis is needed to ensure this will not impact seawater intrusion. P39-7 CONT

A third example of the County's flawed assumptions of no significant impacts to groundwater resources is the sprayfield disposal site at Tonini. See DEIR, Appendix D, p. 5.2-26, which states that during the operation of the proposed sprayfields, potential impacts to groundwater from sprayfield irrigation will include a potential increase in total dissolved solids (TDS) concentration, and nitrate loading of surface soils which can eventually percolate to groundwater. The DEIR cites that the aquifer is an open system and outflow is observed downgradient as seeps and springs on the land surface, and contributes to underflow into the channel alluvium along the Warden Lake drainage and into the Los Osos Creek Valley aquifer. Because the system is open, the DEIR states that, with outflow, the increase in salt concentrations in the groundwater from irrigation practices will reach equilibrium and not continue to increase over time. (DEIR, Appendix D, pp. 5.2-26 -5.2- 27.) The DEIR fails to address what happens to the TDS, and how it will impact the groundwater quality in the area. The DEIR cites that the TDS concentration of treated effluent that would be used for sprayfield disposal at the Tonini Ranch is estimated at approximately 620 milligrams per liter (mg/l) and is comparable to the groundwater that underlies the Tonini site, which was measured and averaged at 606 mg/l. The County claims that because of the similar TDS concentrations, the effects on groundwater from using the LOWWP effluent as an irrigation source versus pumping groundwater for crop irrigation are the same. (*Id.*) This analysis does not address the buildup in salts in the receiving water, and also the likelihood that reclaimed water tends to increase in TDS mg/l over time as the water that is being sent to the LOWWP will increase over time. The 14 mg/l difference will increase as buildout is reached. P39-8

There is a failure to make a connection between the facts presented and the conclusions reached in the DEIR. Although DEIR identifies potentially significant impacts, it relies on unsupported assumptions in an effort to mitigate these impacts to levels that are not significant. Most troubling is the fact that since the County claims these mitigation efforts have resolved the impacts, the impacts to groundwater resources are never analyzed in the DEIR process where the public can participate to ensure their water supply is being protected. The above examples and questions raised illustrate that the County does not rely on substantial evidence to conclude that there are no potential significant impacts to groundwater resources. Argument, speculation, or evidence that is inaccurate or not credible does not constitute substantial evidence. *See Topanga Ass'n for Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 512-517.

(d) The DEIR Fails to Consider a Reasonable Range of Alternatives

Section 15126.6(a) of the CEQA Guidelines states that the range of alternatives that must be analyzed in an EIR is generally governed by a rule of reason, under which the EIR is required to set forth only the alternatives necessary to analytically evaluate the environmental impacts of the proposed project. An EIR is not required to consider alternatives which are infeasible in relation to the purpose of the proposed project. (CEQA Guidelines, § 15126.6(c).)

Rather, an EIR need examine in detail only those alternatives the lead agency determines could feasibly attain most of the basic objectives of the project. (*Id.*) The reasoning for selecting those alternatives must be publicly disclosed by the lead agency in order to foster informed decision-making and public participation. (CEQA Guidelines § 15126.6(a).) The discussion of alternatives should include sufficient information about each alternative to allow evaluation, analysis, and comparison with the proposed project. (CEQA Guidelines § 15126.6(d).)

The failure to consider a reasonable range of alternatives is problematic and mainly supported by two general observations in the DEIR. First, as described above, since the scope of the DEIR is not accurately defined to properly address the project impacts, this causes another problem in that there can be no true determination of what should be a reasonable range of alternatives to the project. Second, the DEIR does not provide enough analysis on why only one reuse option was selected and others were not examined, specifically those using tertiary treatment.

First, because the County fails to set forth an accurate project description, a meaningful alternatives analysis is impossible. Because the DEIR does not provide a stable project description to which alternatives can be compared (DEIR, p. 1-10.), the "alternatives" presented in the DEIR are more akin to a *series* of proposed projects, rather than the means to compare the worth and value of alternatives to a proposed project. The ability of the County to move the "goal posts" of the Project enables it to invalidate any other reasonable alternative it deems appropriate. One of the many illustrative examples from the DEIR states as follows:

> "The additional treatment required to meet tertiary treatment standards, and the associated capital and operations and maintenance cost increases, is not required for the County to satisfy RWQCB requirements. Additional treatment would be required in order to reuse the treated effluent for agricultural or urban purposes; however providing this higher level of treatment is not necessary and is not part of the Proposed Projects. Los Osos area water purveyors may want to pursue this option in the future to enhance the local water supply. Unless the selected wastewater treatment plant site is limited in size, sufficient space would be available for any facility upgrades necessary to upgrade the plant to tertiary level treatment in the future." (DEIR, p. 7-43.)

P39-9

The rationale for elimination of possible project alternatives as not meeting "project objectives" is inappropriate without supporting evidence. (CEQA Guidelines § 15126.6(c).) Here, the County selects objectives that will guide its ultimate decision that do not address the Project Impacts. A proper statement of objectives required by CEQA is intended to assist with making these determinations, and the improper scope of the objectives in the DEIR, as discussed above, renders the alternatives analysis suspect. *Save San Francisco Bay Ass'n v. San Francisco Bay Conserv. & Dev. Comm'n* (1992) 10 Cal.App.4th 908. The requirement that an EIR identify alternatives to the proposed project stems from CEQA's fundamental policy that public agencies

should not approve a proposed project if a feasible alternative or feasible mitigation measures is available that would reduce the significant environmental impacts of the project. (Pub. Res. Code § 21002.)

P39-9 CONT

Secondly, assuming there was a properly scoped Project description and impact analysis which the public can use as a baseline for comparison to other alternatives, the DEIR improperly screened out other reasonable alternatives. When a lead agency screens out certain alternatives from review in the DEIR certain parameters must be followed. CEQA Guidelines section 15126.6 (c) sets forth the parameters for an alternatives screening process, and states that:

> "The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency, but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts." (CEQA Guidelines § 15126.6 (c).)

All four Project alternatives export the majority of the recycled water out of the Basin, and there is no recharge benefit from that loss. All the Project alternatives include the Broderson site and the export out of the Basin, so there is no meaningful comparison for the community to review and evaluate. None of the alternatives consider urban and agriculture reuse. Total seawater intrusion mitigation is 238 AFY versus 187 AFY without urban and agriculture reuse. (DEIR, pp. 7-60, 7-61.) At least analyzing the urban and agriculture reuse alternative is within the reasonable range of feasible alternatives that will foster informed decision-making and public participation.

P39-10

The Supplemental Notice of Preparation mentioned two other potential effluent disposal and reuse locations: urban reuse and agricultural reuse. However, after analysis performed outside of the DEIR, these types of locations were eliminated from further consideration for the current LOWWP project. (DEIR, pp. 7-8, 7-9.) There is no documentation of the analysis of why alternative reuse projects were not carried forward to the DEIR. The County does cite to prior analysis being conducted in Rough and Fine Project Screening Reports; however, those prior reports laid the foundation for the alternatives, but did not provide needed analysis and public involvement under CEQA to decide which alternatives to carry forward.

> "[T]he County has been examining a wide range of alternatives on a co-equal basis. Technical Appendices B-1: Alternatives Development and Descriptions and B-2: Systems Component Evaluation, and the Fine Screening Report (Carollo Engineers

> 2007a) and Rough Screening Report (Carollo Engineers 2007b) summarize the process followed to identify the four Proposed Projects discussed in this Draft EIR and to set aside other alternatives from further consideration." (DEIR, p. 7-5.)

The County has decided to carry forward only one reuse option in the DEIR. As cited above at DEIR, p. 7-43, the reasons the County does not carry forward other reuse alternatives that implement more reuse in the Basin are: (1) the additional treatment capital and operations and maintenance costs associated with the alternative are not required to meet the RWQCB requirements; (2) providing this higher level of treatment is not necessary and is not part of the Proposed Project; and (3) Los Osos area water purveyors may want to pursue this option in the future to enhance the local water supply. The County does not use the above identified CEQA factors to screen out other reuse options. It appears the main reason for the County's exclusion of other reuse options is cost. P39-10 CONT

(e) Failure to Identify a Proper Environmental Baseline

The baseline for assessing impacts of a proposed project will normally be the environmental setting for the project at the time the Notice of Preparation is published. (CEQA Guidelines § 15125(a).) As a general rule, the baseline determination is the first step rather than the last step in the environmental review process. (*Save Our Peninsula Committee v. Monterey County Board of Supervisors* (2001) 87 Cal.App.4th 99, 124-125; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App.4th 931, 955 [description of environmental setting includes analysis sufficient to allow informed comparison of pre-project and post-project conditions].) Failure to use current and available data that are highly relevant (indeed determinative) to an impact analysis in an EIR violates CEQA. (*See Berkeley Keep Jets Over the Bay Committee v. Port of Oakland* (2001) 91 Cal.App.4th 1344.)

The environmental baseline provided in the DEIR is inadequate in several ways. There is an inadequate identification of potable well locations, production and quality. Also missing from the DEIR is the location of current potable water utility infrastructure, and how the LOWWP might interfere or impact those facilities. There is no proper baseline of how current septic recharge impacts the salt-water intrusion.[2] An inadequate amount of water quality data is analyzed in the DEIR—data critical in developing a proper monitoring plan for potential impacts from the Broderson site. There is no discussion about the current rates or methods of water conservation in the community. The DEIR needs to more thoroughly identify the currently P39-11

[2] See, specifically, DEIR Appendix D, pp. 5.2-18, 5.2-19:

> Implementation of the proposed project would reduce septic effluent discharge into the perched aquifer (Zone A). Therefore, the project would reduce the quantity of groundwater within the perched aquifer. However, the exact quantity of reduction within the perched aquifer is unknown and the potential impact on groundwater flow to surrounding surface water features is speculative given that the amount of perched groundwater currently flowing to surface water features is not known.

regulatory requirements of the RWQCB for the LOWWP. The assumptions with the current groundwater budget need to be more thoroughly examined to ensure accuracy. P39-11 CONT

2. Other Specific Concerns

In addition to the above examples illustrating the concerns with the CEQA process, GSWC provides the following additional concerns with the DEIR.

(a) WDR. Has there been an effort to work with the RWQCB to identify what the requirements will likely be for a WDR for the LOWWP, rather than the requirements of previously planned projects? P39-12

(b) Project Flexibility. The Project needs to provide flexibility and avoid facilities that make it more difficult to implement tertiary treatment in the future. Specifically, the County's use of facultative ponds in Alternative Four will produce an effluent that is more difficult to refine into high quality recycled water. P39-13

(c) Tertiary Treatment. If the water purveyors were to install tertiary treatment and look for recycled water users, how would they integrate with the County, e.g., get effluent and access to the Tonini site? P39-14

(d) Other Possible Water Supply Mitigation Measures. Has the County considered suggestions such as TAC Member John Brady's suggestion about using groundwater from existing agricultural wells at the Tonini site to recharge and/or blend with effluent to be recharged or as a source of water during startup? (Email communication from John Brady to Paavo Ogren, dated 12/10/08). P39-15

(e) Impacts to Infrastructure. How will impacts to water purveyors' infrastructure from construction activities be avoided or mitigated? P39-16

An EIR that addresses these concerns is in the best interest of the community to ensure its water supply is being properly managed and protected. GSWC welcomes questions or responses to these comments, and looks forward to resolution of these issues.

Sincerely,

C. Wesley Strickland

CWS/gml

cc: Paavo Ogren, County of San Luis Obispo, Dept. of Public Works
John Waddell, County of San Luis Obispo, Dept. of Public Works
John Schempf, Los Osos Community Services District
David Tolley, S&T Mutual Water Company
Toby Moore, Golden State Water Company

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Golden State, C. Wesley Strickland, January 30, 2009 (Letter P39)

Response to Comment P39-1

This comment suggests that community of Los Osos will face severe water supply impacts if proper water reuse alternatives are not analyzed and implemented. This comment is noted and the commentor is referred to the project objectives stated in the Draft EIR Executive Summary, Section 2.2.3 wherein there is the statement that the primary purpose of the Los Osos Wastewater Project (LOWWP) is the development of infrastructure for a wastewater collection, treatment, and disposal system to serve the community of Los Osos. Specific objectives of the LOWWP are to develop a wastewater system that will comply with the Waste Discharge Requirements (WDR) set by the Regional Water Quality Control Board and to alleviate groundwater contamination (primarily nitrates) that has occurred due to leaking septic systems. Another objective of the LOWWP is to address water resources related to impacts of seawater intrusion into lower aquifers. Various reuse alternatives are discussed throughout the Draft EIR, notably in Section 7 "Alternatives," and allow the County flexibility to consider additional options in the future related to recycled water beneficial reuse alternatives. See Topical Response 4, Tertiary Treatment.

Response to Comment P39-2

This comment expresses a concern that the Draft EIR Project Description (PD) does not fully define the project as "the whole of the action" related to potential environmental effects for decision-makers and the public to understand. Further, the comment contends the Draft EIR does not meet the threshold of sufficient detail and accuracy to permit informed decision-making. The Draft EIR is very clear about the Project Objective (Summarized in Section 2, Executive Summary; Section 3, Project Description; and Section 7, Alternatives to the Proposed Project) Further, ample reference is made (by incorporation) to the Carollo Fine Screening Report which established the basic criteria for wastewater collection systems, wastewater treatment alternatives, and disposal methods. This report was followed by a series of Technical Memoranda by Carollo further describing the components of the proposed wastewater treatment system (the Project). Also see Topical Response 1, The Proposition 218 Election; and Topical Response 4, Tertiary Treatment and Project Scope.

Response to Comment P39-3

This comment expresses a concern about the overall description of the project and the assessment of impacts on the Los Osos community by changing wastewater disposal methods from the existing septic systems to a collection and treatment system. The core of the objection in the comment seems to be related to addressing the impacts to the groundwater resources and that the Draft EIR does not fully analyze the reuse opportunities of tertiary-treated wastewater to mitigate the potential contamination issues. Refer to Topical Response 3, Water Resource and Project Scope; and Topical Response 4,Tertiary Treatment. Further, there is discussion in Draft EIR Section 5.2, Groundwater Resources and Appendix D, Groundwater Quality Resources."

Response to Comment P39-4

This comment expresses a concern that the Draft EIR fails to develop and maintain a constant Project Description. The comment asserts that the Draft EIR does not select a single, proposed project. Rather, it provides an analysis of four alternatives. This comment is true—it was the intent of the Lead Agency (County of San Luis Obispo) to provide a co-equal analysis of four different, but similar, alternatives (this is similar to a NEPA-type document). The alternative proposed projects showed the range of collection system alternatives (STEP and gravity), treatment plant sites (four out of town) and treatment technologies. These different proposed projects are well articulated in the Project Description (Section 3) and the Alternatives analysis (Section 7 of the Draft EIR). See also Topical Response 3, Water Resources and Project Scope; Topical Response 5, Alternative Collection Systems; Topical Response 6, Alternative Treatment Systems; and Topical Response 7, Alternative Disposal Options. It should be noted that the Draft EIR did identify the Environmentally Superior Project in Section 7 that combined some features of the four different proposed projects. All of this co-equal analysis and environmental analysis was made to help the public and the decision-makers understand the complexity of the alternatives and provide a firm basis for their conclusions. Refer to Appendix Q for details on the Preferred Project description and evaluation of the impacts.

Response to Comment P39-5

This comment expresses a concern regarding potential impacts to the groundwater supply. These opinions are noted. The CEQA guidelines were used for the Draft EIR and the groundwater study findings determined that the LOWWP does not substantially degrade groundwater quality, deplete groundwater supplies, or interfere with groundwater recharge to create a net deficit, or lower the local aquifer table such that the production rate of pre-existing wells in the basin would drop and fail to support existing or planned land uses. The commentor is referred to Appendix D-2 attachments Appendix C, Groundwater Model Hydrogeologic Budget Results and D, Water Quality Mass Balance Summary, and Tables 8, 9, and 10 (for supply summary) and Tables 12 and 13 (for quality summary).

Response to Comment P39-6

This comment expresses a concern regarding seawater intrusion and groundwater conservation measures. The disposal capacity provided by the Broderson leachfield design component of the LOWWP results in eliminating the potential impact (identified by the commentor) of removing septic system recharge. The Broderson disposal alternative not only minimizes the acreage required for sprayfield disposal it also minimizes potential project impacts to groundwater resources. These potential impacts of the project design and proposed operations were addressed in the Draft EIR analysis (see response to comments P39-5, A3-4, A8-8, P11-16, P11-37, P41-5). Because the project impacts analysis did not identify any significant impacts with regard to the proposed operation of the designed project alternatives, mitigation measures were not necessary. However, the project Fine Screening Analysis, project component design reports, and supporting studies provide sufficient analysis for the public and decision makers to determine the sufficiency of the project alternatives designed.

See Topical Response 3, Water Resources and the Project Scope; Topical Response 7, Alternative Disposal Options; Topical Response 8, The Broderson Leachfield; and Topical Response 9, Water Conservation Measures.

Response to Comment P39-7

This comment states that additional analysis related to impacts on groundwater at the Broderson site is needed. See response to comments P39-5 and P39-6.

Response to Comment P39-8

This comment expresses a concern regarding impacts associated with groundwater resources at the Tonini site. See response to comment P15-2, A5-4. The Draft EIR recognizes that salt buildup in groundwater is inherent to irrigated agricultural land uses. Agricultural irrigation for disposal at Tonini will be conducted under similar conditions as existing irrigated agricultural lands in the Los Osos Valley. To date there is no sign of any significant impact from these practices which render the groundwater quality unusable for overlying beneficial uses. The nutrient concentration of the LOWWP effluent will be reduced by treatment to 7 mg/l of nitrate (equal to the background concentration at Tonini) and further consumed by plant up take and denitrification processes in the soil. In addition, the bedrock aquifer that underlies the Tonini disposal site is not part of the Los Osos Groundwater Basin utilized by the community for a potable water supply. The 620 mg/l TDS concentration of the effluent is 380 mg/l below the secondary drinking water standard in the State of California (1,000 mg/l).

The commentor has apparently confused quantity of effluent increases at buildout (AFY) with effluent concentration increases (mg/l). See Response to Comments P39-5 thru P39-7.

Response to Comment P39-9

This comment suggests that the scope of the Draft EIR is not accurately defined to address project impacts and presents two general observations regarding the Draft EIR. The first observation is that the Draft EIR does not provide a stable project description for different alternatives may be compared and that rationale for elimination of project alternatives as "not meeting project objectives" is inappropriate. As stated in Response to Comment P39-4 above, it was clearly the intent of the Lead Agency to pursue multiple project alternatives (similar to a NEPA document) and provide impact analysis and assessment of the alternatives relative to each other. This provides a more robust analysis for decision-makers to consider. Similar to Response 39-4, above, refer also to the Alternatives section in the Draft EIR (Section 7) and Topical Response 3, Water Resources and the Project Scope; Topical Response 5, Alternative Collection Systems; Topical Response 6, Alternative Treatment Systems; and Topical Response 7, Alternative Disposal Options.

Response to Comment P39-10

This comment is the second of two observations begun in Comment 39-9. This comment centers around the perception that all wastewater is taken out of the Los Osos basin and little is returned for water resource management. The Broderson leachfield is used as a significant portion of the

wastewater disposal scenario presented in the Draft EIR. As such, there is benefit to the local aquifers as well as movement of water to the lower aquifer to help stem the saltwater intrusion. Section 5.2 and Appendix D of the Draft EIR present lengthy discussion on the benefits of the use of the Broderson leachfield. Refer also to Topical Response 3, Water Resources and Project Scope; Topical Response 4, Tertiary Treatment; and Topical Response 7, Alternative Disposal Options.

Response to Comment P39-11

This comment states that the environmental baseline for the project evaluation is not adequate. Specifically, impacts to existing water utility infrastructure needs to be addressed. Impact 5.7-D in Section 5.7 of the Draft EIR addresses potential accidental breaks in the main water lines during construction activities.

This comment also states that there is not a proper baseline for septic recharge impacts related to salt water intrusion. Various groundwater studies have been conducted and Impact 5.2-A in Appendix D-1 provides information regarding current seawater intrusion reduction within the lower aquifer.

This comment further states that the Draft EIR needs to more thoroughly identify the current regulatory requirements of the RWQCB. Section 3 in the Draft EIR provides the actions needed by the Central Coast Regional Water Quality Control Board and Section 5.2.3 in Appendix D-1 provides a water resources regulatory setting.

Response to Comment P39-12

This comment expresses a desire for clarification regarding the Regional Water Quality Control Board's requirements for Waste Discharge Requirements. The project team has met with Regional Water Quality Control Board staff throughout the development of the project. The RWQCB staff has repeatedly confirmed that using the WDR's developed for the previous project, and described in Section 3 of the EIR (Table 3-1) are appropriate

Response to Comment P39-13

This comment states that the project needs to provide flexibility and avoid facilities like the facultative ponds that will be more difficult in the future to refine into recycled water. The County has recognized this and has identified the use of an oxidation ditch or Biolac as part of the Preferred Project (see Appendix Q).

Response to Comment P39-14

This comment expresses concerns regarding the integration of tertiary treatment and the effluent and access at the Tonini site. The County intends to make treated effluent readily available to the purveyors for their use in any future recycled water project that benefits the community of Los Osos. Site plans for the Tonini site provide for space to install tertiary equipment; the site itself is large enough to accommodate essentially any storage needs. As an example, the County team along with Technical Advisory Committee members and members of the public recently visited the Scott's Alley Wastewater Treatment Plant to observe the tertiary system installed at the treatment plant by the

water purveyor. That system was designed and constructed by the water company but is operated by the treatment plant staff. We believe it is a good example of cooperation between the wastewater agency and the water company and can serve as a good model for similar relationships in Los Osos.

Response to Comment P39-15

This comment expresses a desire for the consideration of using groundwater from existing agricultural wells at the Tonini site for recharge purposes. The existence of groundwater supplies at the Tonini site may provide additional options for addressing water issues in Los Osos. However, at this point in time, no investigation of those options is undertaken.

Response to Comment P39-16

This comment expresses a concern about potential impacts to existing utilities (water) from construction activities of the LOWWP. The construction contractor is required by normal construction practices and County permit conditions to take steps necessary to identify the location, depth, and nature of all existing utilities in the vicinity of any excavation work to avoid disrupting the service. This is required through services such as "USA Alert" or "Dig Alert" that coordinate all utilities to mark their existing utilities found to be present. Should the project interrupt or require changes to a utility service, it will be the responsibility of the project to provide repairs or relocation so that service is restored in a prompt manner.

To: Mark Hutchinson, SLO County, LOWWP Staff

From: Alon Perlman, Los Osos. CA

Date: January 29, 2009

Re: LOWWP Draft EIR Comments submitted herein

This communication is to comment on the Los Osos Waste Water Project Draft EIR. It is intended for inclusion in the EIR.
The primary intended audience, are the professionals and experts involved. Therefore most of these comments are arranged in sequence matching the DEIR organization. It is suggested that this submission be read with a copy of the DEIR present.
Sections regarding Broderson recharge seawater intrusion and Tonini sprayfields are expanded within the text and are more general in discussion due to subject matter. Members of the Public and non-technical readers may find the some discussions within each section more useful Also the last paragraphs on this page and the next are also meant mostly for general public reading and to provide a context for others.

It is intended that this entire submission be responded to in general and in specific. Statements included in this submission should be responded to irrespective of whether they are formed into a discrete question or not. Many questions have been underlined but there are a few that are comingled in statements. Responses are requested for all question marks (including this one?)? Comments may be preceded with a heading as to the type of issue. Typographical errors correction suggestions as well as large issues are intermingled. Specific attachment and inclusions and external evidences are submitted as well.

Due to the size of the appendices it is not possible to eliminate duplication but it is believed that the nitrate maps prepared by District engineer and TAC member Rob Miller may be first submitted here and are unique and not in the DEIR, Similarly the graphic in the produced by SLO APCD and located in Air Quality section is not believed to be referenced. It was not originally intended to include as many photographs but personal constraints for time prevented more text or full citations.

The author of this submission has worked as a clinical microbiologist, a research microbiologist, written clinical trial research protocols, was certified as a regulatory affairs professional (FDA) and participated in multi-disciplinary teams. Where specific supporting documentation is too cumbersome, this author may use arguments based on BASIC SCIENTIFIC PRINCIPLES. Assumptions based on “Biological plausibility” are acceptable to regulatory authorities, similarly hydrological, and chemical effects. Reviewers of these comments are requested to vigorously challenge the scientific plausibility of the comments or assumptions made by this author.

Los Osos is a home to many fine people from all walks of life including active and retired educators and professionals, scientists and regulators. One of the affects of the politicization of the various sewerings and stoppages in Los Osos is that there is also a cadre of highly involved and active, amazingly educated, partly educated, experienced through life and profession, knowledgeable, apparently knowledgeable, individuals and groupings. And then there are some possessing a little knowledge, to a dangerous degree. For that reason the page also addresses those who may only read the first pages.

There is a short summation at the end of the review, there the fatal flaw is discussed.

DISCUSSION ADDRESSING THE GENERAL PUBLIC:
Los Osos is built on a series of, now fixed, historically shifting dunes, that created a layered sand filtering system composed of layers of the unique Baywood fine sands, clay, and gravel. That system produced what was advertised in the 1930's as the best drinking waters in California. The earlier developer also deliberately constructed many long narrow lots selling them 2 apart for a low amount, expecting that the owners, as they start to develop, will buy up the empty adjacent lot.

For tens of thousands of years this area has been inhabited by humans and has, even for those earlier and in some cases, seasonally nomadic civilizations, has ALLWAYS served as a retirement village. The tidal exposure of clams, an easy protein source, oak seed pods availability, the presence of clean water sources, and a mostly mild micro-climate made it possible mostly in an area bounded by little over four square miles and continuously habituated by humans. In the present day a serene beauty is maintained, enjoyable with little to break the silence other than the chirping of birds, and the occasional crack of a shotgun as bird hunting season overlaps the recent Bird festival that brings much needed tourist dollars here and to the nearby town of Morro Bay.

Currently, thanks to action taken by individual Citizens and agencies of the state, a green belt was created. Additionally the area is still relatively free of encroachment due to the Williamson Act's preservation of Agriculture, and County planning policies. Historically referred to as South Bay, or Baywood Park, The Town is known as Los Osos.

Jutting into the cleanest estuary in the US west coast and whose self-sustaining water supply is dependant on the halting of seawater intrusion. High nitrate levels
Private properties separated by empty lots containing in some cases habitat for endangered species or active riparian habitat serve as additional wildlife corridors connecting the green belt(s) with the Bay and Estuary.

Review proper
General comments
For detailed discussion and of Sprayfield disposal see also the section of Public Health.
Expanded section B-1: Proposed Projects Descriptions information was used
*""Because the effluent disposed at the sprayfields would likely not meet Title 22 tertiary treatment standards, the sprayfield area would be fenced off to **prevent public contact with the water**"" .*
Though it is appropriate to use questions, this reviewer is not able to avoid stating that (and as presented to the SLO counties supervisors) applying secondary treated wastes to agricultural lands or to replenish a reliable thousands of year old aquifer and a still mostly intact sand filter that created, it will not work.
Will the EIR requestor (the County) ensure that additional processing will not be required

P40-1

Section 5.1 Land Use and Planning
Subsection 5.1.5 page 5.1-1, 2
There is a short statement of "no significance, or less than significance", effecthowever the population contains a segment of seniors on fixed income. It is likely that a large amount of that segment will be forced to sell their homes due to the burden of what may be an overall increase of cost of services and infrastructure as high as 300$ per month (projected by this r3eviewer based on accuracy of last two projections in early '95. Unplanned migration out of the area and increased need for social services, is likely to burden the county and cause unforeseen changes in land use unaccounted in current planning documents. Why are demographic alterations not considered a land use effect.
Why is the affect of the project on tourism not considered?
Has the effect of the sprayfield on bike trails at Turry road adjacent sprayfields been considered? this could conflict with county plans for area and within the transportation section there is no mention of it, please confirm?

P40-2

Section 5.2 Groundwater Resources
Subsection 5.2.1 page 5.2-2
General Discussion

There is expected to be extensive submissions by others on this section.
Key to note that 631AFY are attributed to septage return flow. It is not clear from this section what percentage of that flow is due to prohibition zone septics and will cease once a project is underway, and what percentage is due to septics within the town and within the same element within the Sub-hydrologic unit but that are located outside the prohibition zone, and will not be subject to discharge prohibition?
Once the project is built how much of 631 AFY expected to decrease? And why not use 600 AFY as in the comparable discussion on the expanded section Appendix "D" 5.2-7.

P40-3

P 5.2-3 How will 470 AFY of seawater intrusion be expected to increase? (should also be specified for intended Broaderson leachfield at 0, 50% and 100% presumed capacity recharge, or under other conditions of intended use)

Global Warming scenarios abound. This Author prefers a forecast of Sea level rise of no more than two inches in the next decade and "anybody's guess" thereafter (on average, during High tides the effect would be magnified). This means that in the life of the project (30 years), hydrological pressures will continue to drive Salt water intrusion.
Zone D lower aquifer Salt water advance is stated to be between Pecho and Doris St.
Zone E is stated to have an advance further along between Broderson and Palisades.

1. What are the projections for current location of the salt line, since the DEIR uses 2005 figures (each zone)?
2. What are the projections for the location of the salt line at the point in time that (project is complete, and) reclaimed waters are scheduled to enter the Broderson leachfields ?
3. Given that the salt water intrusion is essentially at Broderson; Can it be confirmed that increasing the head at that point would not dilute and push brackish water into the very zones that Broderson recharge was originally intended to protect (Brackish-less concentrated than sea water but impossible to drink, hard to desalinate) ?
4. In section 5.2.3 , can "Thresholds of significance" under CEQA (select ones listed below) be held to be "less than significant", if 2013 salt water advance predictions place Broaderson recharge pushing the saltwater East (inland) as discussed previously.
5. The "salt line" is assumed by this reviewer to pass diagonally towards North -East (as opposed to a line going straight north as the roads do). Where further north (and slightly East in the Baywood district is there intrusion? What can be done about recharging the aquifer in that area? If intrusion continues from that direction will it not make an eventual end around the Broderson solution.

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CONT

"For Hydrology and Water Quality Environmental Issues, would the project:
a. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
b. Otherwise substantially degrade water quality?
c. Conflict with local programs or policies related to groundwater quality or water supply?"

5.2.4 - Level of Significance Prior to Mitigation

Less Than Significant or No Impact

5.2.5 - Mitigation Measures

No mitigation measures are required.
Why is the Broderson recharge not considered as a mitigation (at least as a comment)?

5.3- DRAINAGE AND SURFACE WATER QUALITY

This section includes a submission of Nitrate influence maps (appendix)
and a submission of maps and photographs of the minor drainages that represent the Bay outfall of storm water

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Page 5.3.1 Area coastal and inland precipitation values are given. Rainfall estimates at the Tonini Sprayfields are not given, nor are numbers of rainy day estimations given though those could affect how the relative use of Broderson or Tonini Sprayfields.