



SAN LUIS OBISPO COUNTY
DEPARTMENT OF PLANNING AND BUILDING

VICTOR HOLANDA, AICP
DIRECTOR

August 31, 2009

Piper Reilly
691 Woodand Drive
Los Osos, CA 93402

County Of San Luis Obispo
Department Of Public Works
Attn: John Waddell
INTEROFFICE

SUBJECT: APPEAL OF DRC2008-00103 – COUNTY OF SLO - LOWWP
HEARING DATE: August 13, 2009 / PLANNING COMMISSION

We have received your request on the above referenced matter. In accordance with County Real Property Division Ordinance Section 21.04.020, Land Use Ordinance Section 22.70.050, and the County Coastal Zone Land Use Ordinance 23.01.043, the matter has been scheduled for public hearing before the Board of Supervisors. A copy of the appeal is attached.

The public hearing will be held in the Board of Supervisors' Chambers, County Government Center, 1055 Monterey Street, Room D170, San Luis Obispo. The project has a hearing date of **Tuesday, September 29, 2009**. All items are advertised for 9:00 a.m. If you have any questions, you may contact your Project Manager, **Murry Wilson**. A public notice will be sent out and you will receive a copy of the notice.

Please feel free to telephone me at 781- 5718 if you have any questions.

Sincerely,

Nicole Retana,
County Planning and Building Department

CC: Murry Wilson, Project Manager
Jim Orton, County Counsel

#1787

SLO CNTY
PLANNING/BUILDING
DEPT
7/01/09

COASTAL appeal form

San Luis Obispo County Department of Planning and Building

2009 AUG 27 11:4:05

Please Note: An appeal should be filed by an aggrieved person or the applicant at each stage in the process if they are still unsatisfied by the last action.

PROJECT INFORMATION Name: LOWWP File Number: DRC 2008-00103

Type of permit being appealed:

- Plot Plan
- Site Plan
- Minor Use Permit
- Development Plan/Conditional Use Permit
- Variance
- Land Division
- Lot Line Adjustment
- Other: EIR CERTIFICATION
CEQA FINDINGS

The decision was made by:

- Planning Director (Staff)
- Building Official
- Planning Department Hearing
- Subdivision Review Board
- Planning Commission
- Other _____

Date the application was acted on: 08/13/09

The decision is appealed to:

- Board of Construction Appeals
- Board of Handicapped Access
- Planning Commission
- Board of Supervisors

BASIS FOR APPEAL

State the basis of the appeal. Clearly state the reasons for the appeal. In the case of a Construction Code Appeal, note specific code name and sections disputed). (Attach additional sheets if necessary)

LOWWP VIOLATES CZLUO SECTION 30108, 23.04.430, & 23.08.288(d)

IT ALSO VIOLATES CALIFORNIA COASTAL ACT SECTIONS 30230, 30231

PLEASE SEE ATTACHED

List any conditions that are being appealed and give reasons why you think it should be modified or removed.

Condition Number _____ Reason for appeal (attach additional sheets if necessary)

APPELLANT INFORMATION

Print name: PIPER BEILLY

Address: 691 WOODLAND DR, LOS OSOS

Phone Number (daytime): 528-0691 or 704-7255

We have completed this form accurately and declare all statements made here are true.

Signature Piper Beilly

Date 08/27/09

OFFICE USE ONLY

Date Received: 8/27/09

Amount Paid: 0

By: Chris Macen, Sec.

Receipt No. (if applicable): N/A

Coastal Appeal Form Supplemental Information 08/27/09

The LOWWP is highly impactive and violates;

CZLUO Section 30108 which defines "feasible" as "accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."

Public works chose an unsustainable project over sustainable options. In the Recorded Engineers Report for the 218, it was promised that STEP and Gravity costs would compete through the construction bidding phase., (see support **doc. A**). In January of this years Supervisor Gibson took the STEP option off of the table breaching the 218 contract.

Gravity was found by the County to be the environmentally preferred technology based upon faulty data which can be proven if STEP were allowed to compete fairly in an open bidding process, (see support **doc. B** for cost of STEP and support **doc. C1 & C2** green house gases and STEP).

The purpose of the LOWWP is to conform to a regulatory agency demands based upon controversial, 25 year old data, when 3 year old data shows we are at near legal limits for nitrates and the County has admitted that nitrates may not change, even with the LOWWP, for decades.

In contrast, non point source pollution, sea water intrusion,(SWI), has been ignored by both the County and the Water Board for decades.

If we are in danger of losing our water supply to SWI in the near future, why should we spend two hundred million dollars to remove nitrates when our water supply is being polluted by chloride?

By taking all of the proposed septic off line, SWI will be exacerbated and the habitat will die quickly. LOCSD District Engineer, Rob Miller stated at a recent LOSCD Basin Update that Los Osos will look like a very different place, update, and that if a solution for the basin imbalance is not found soon, importing water or desal is a possibility.

Supervisor Gibsons most recent position is that the ISJ will solve basin issues. These Purveyors, three business entities, who control 2/3 *or less*, (current data is incomplete), of the basin are to fix a problem which has gone on for decades.

During those decades, San Luis Obispo County was Los Osos' Water Purveyor and in the early 1990's, in order to solve the LO Basin's problems, the County put together a Technical Advisory Committee consisting of one representative from each of the Purveyors and CSA9 representative, Paavo Ogren.

That group accomplished nothing and Paavo Ogren, as current head of Public Works, has not focused adequately on the heath of the Los Osos aquifers when he is and was fully aware of it's alarming status. There is nothing to indicated that the current ISJ will be any more successful then the efforts headed by Mr. Ogren in the past. This violates **CZLUO 23.04.430** water availability. Without current data we have no idea if we will have water for ourselves, the farmers or future generations.

What would be successful is to be proactive and implement an immediate basin wide conservation element, (as suggested by the LOSG and accepted by the Planning Commission), as well as informing residents of the critical status of our water supply.

Also, implement LID practices. As Ms. Darla Engles explained; in an undeveloped area like Los Osos, it is the perfect opportunity to enact LID strategies which will help reduce flooding, (decreasing current pumping costs), assist with greater recharge, less run off/polution, plus LID has the opportunity for grant funding.

As a member of the Los Osos Sustainability Group please see support **Doc. D** for further information on violation of **LCP Coastal Watershed Policy 1,2,3,5 and Sensitive Habitat Policy 2&7 and more.**

In accordance with **CZLUO Section 23.08.288(d)** STEP/STEG is the least damaging feasible alternative because it utilizes the installation technology of inline directional boring 4" pipe at a depth of 4' which can include a camera to help avoid cultural artifacts, (plentiful in the area).

Gravity must dig deep trenches for wide pipes displacing large amounts of dirt and requiring de-watering. This will have a, yet undetermined, effect on SWI.

Due to Gravity's inadequate slope under conservation conditions, and the Planning Commissions decision to seal 12% of gravity collection pipes, a supplemental EIR should be done to show redesign of slope, (as mentioned by John Waddel at the Planning Commission hearings), it's cost, effects on trench size and de-watering as well as effects on air pollution due to increase in large equipment needed to install large diameter gravity sealed pipes.

Since the TAC hearings 2 years ago, we have consistently asked for the above information but were ignored. STEP/STEG is 100% sealed . Gravity is not sealed and therefore has a predictable exfiltration/leakage rate and the LOWWP anticipates 300,000 gallons of I/I per day. This is in violation of **California Coastal Act Section 30230** prevention of discharge which could degrade coastal water quality. Currently our septic discharge primary treated effluent to our leach fields and then are filtered through varying depths of Baywood fine sand, vadose zone. On the other hand, Gravity pipes will be releasing raw sewage on a consistent basis where as STEP's 100% sealed pipes are more likely to remain completely leak free.

Since the solids stay in the STEP tank and go through biological processes which break them down, sludge is not in an issue as it reduces itself naturally up to 75%. This is in contrast with Gravity which produces large amounts of sludge. The sludge disposal solution in the LOWWP was non existent and therefore not feasible violating **CZLUO 23.04.430**. sewage disposal capacity.

The current Gravity plans may require potable water for flushing, defeating conservation measures. The only argument given by the Planning Commission for STEP being unacceptable was that it would rip up resident's front yard. When everyone's septic go off line and their entire yards start to die people will water more outside, again defeating any conservation achieved.. By not maximizing conservation and utilizing LID practices, due to the level three water severity and SWI issues, the current project is again in violation of **CZLUO 23.04.430** water availability.

The Gravity plan uses the Mid Town site as a central sewage collection point and chemical mixing station. This component, located on ESHA and next to a protected Marine Reserve would not be required in a STEP/ STEG design. STEP/STEG does not require pump stations, (currently planned in the Gravity system to be built in ESHA). Again, STEP/STEG is less impactful/ least damaging then Gravity supporting **CZLUO section 23.08.288(d)**.

Only the current MWH Gravity plan requires Broderson as a recharge site. It is a highly controversial due to speculative speculations through the aquitard as discussed by soil scientist Larry Raio and by Jeffery Young in a 2006 response to the CDO's. . The area, which is a hill with 600 homes, will be susceptible to becoming a liquefaction zone threatening homes and thousands of lives.

Also placing effluent at Broderson would reintroduce endocrine disruptors to our potable water supply defeating part of the purpose of collecting it in the first place. The California PTA and EPA have resolutions against this practice and these emerging contaminants are quickly becoming a major issue nation wide. To put them back into where you just took them out of makes no sense. Paavo Ogren has publically stated that Broderson may not even work. With all of the it's downfalls, (pun intended since Broderson is a hill with 600 home), it should be eliminated. We have 2 major fault lines in the Los Osos vicinity and slides are a real possibility. Also, in regards to earthquakes, it is much easier to fix damage in a low pressure waste water system then it is to fix the trunk lines of a gravity system. In the event of an emergency, replacement parts would have to be staged locally. The impacts and costs of this element have not been examined.

The LOWWP chose Biolac for treatment which violates **CZLUO section 23.04.430 and section 30108**. Biolac perpetuates the sludge problem gravity collection begins. The LOWWP does not have a disposal solution for the ample sludge produced by gravity collection and Biolac treatment. By using STEP with a passive ponding sytem, sludge is natural reduced to such a great extent that disposal of sludge may not come up for at least 50 years. The LOWWP expects hauling twice per week.

Biolac treatment uses high energy compared with passive or AES ponds and Biolac has a greater visual impact. In an area of scenic beauty, such as Los Osos, flat ponds can be hidden with landscaping and there extended turn over times diminish the possibilities of spills. Utilizing a combination of sites, Cemetary, Giacamazi, etc., a ponding system could be created in a park like setting which could include storage, wetland polishing with the opportunity for carbon credits or cash crop and to install solar and/or wind power. This inexpensive, unobtrusive and productive solution should be put back on the table.

We need current data and third party oversight in order for this to become a sustainable project. Studies need to be done as to where SWI is today and all the "straws" in the aquifer need to be accounted for.

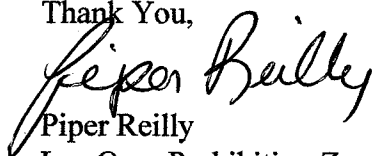
The process needs to be opened up to include the promised STEP and Gravity comparison and a passive ponding system needs to be re evaluated for the new treatment location. This accompanied by the reworking of the 12% sealed gravity system under conservation numbers should be sufficient to warrant an SEIR.

The 218 passed before the global economic crash and the 218 promise then a fair comparison of technology and price. Many more can now not afford the LOWWP's high price tag then before. The costs submitted by Orenco for collection accompanied by quotes from several ponding companies, comes to 1/3 of the cost of the proposed LOWWP

Displacing thousands from their homes, due to avoidable economic hardship, when less impactful and less expensive technologies are available, violates **CZLUO section 30108 and section 23.08.288(d)**.

Please put STEP/STEG and passive ponds back into the process for consideration.

Thank You,



Piper Reilly

Los Osos Prohibition Zone Property Owner

Los Osos Sustainability Group Member

SUPPORT DOC A

Pursuant to Guideline No. 2 above, the special benefit of the collection system was selected such that a range of collection system alternatives could be funded. In the current project selection strategy, the STEP and gravity alternatives would compete through the construction bidding phase using a competitive bid, design/build, and/or build/own/operate/transfer process. If gravity system bids are received near the high end of the cost range, it is unlikely that gravity will be competitive with STEP. For this reason, the allocated special benefits will be based on the low end of the gravity system cost range, which would also cover the cost of a STEP system.

Consistent with previous assessment proceedings in Los Osos, the collection system can be separated into three components, defined as follows:

Lateral component: Laterals are defined as individual service lines that extend from the main in the street to the property line. In a STEP system, the lateral component would include the publicly financed and owned collection system components that are located on each private property within appropriate public easements that will need to be established for ownership and maintenance by the County, including the STEP tank, pump, control panel, and appurtenant facilities.

Trunk component: This component includes larger gravity mains, force mains, pump stations, and standby power facilities that serve regional areas. During the previous assessment proceedings, the trunk component was determined to include 19.1% of the planned pipelines. This percentage will also be used for the current assessment. Conveyance facilities required to pump wastewater to a treatment plant site if located east of Los Osos Creek would be included in this component.

Collector component: Collectors are defined as the localized sewer mains and pocket pump stations that convey water to trunks and regional pump stations. Some areas of the community, notably Bayridge Estates and Vista de Oro, have existing lateral and collector infrastructure as part of their existing community septic systems.

Table A.1 on the following page summarizes the proposed special benefits for each component of the collection system. The costs were derived from the low range of the gravity collection system, as summarized in the Fine Screening Report.

Treatment, Disposal, Permit, and Administrative Project Costs

In addition to the three collection system components described above, two additional project components are required to complete a functional wastewater system as follows:

Treatment/Disposal Component: This component includes the cost of the wastewater treatment facility, the effluent disposal system, and the wastewater treatment facility site.

SUPPORT DOC B

Below is Mike Saunder's, response regarding cost for STEP vs. Gravity: 8-25-09

I have worked with Orenco Systems, Inc for 4 1/2 year. Prior to that, I was the County Utility Engineer for Charlotte County Utilities for nine years. During my time at Charlotte County, I experienced a failed conventional sewer approach (40,000 connections), executed the extension of STEP wastewater collection to 5,000 properties. The use of STEP systems in Charlotte County provided significant capital cost savings when compared to the proposed gravity system.

Charlotte County Utilities was and is the oldest and largest STEP systems in the world. It is operated in conjunction with a conventional gravity sewer system that serves more than 20,000 homes. Based on my experience and observations, I offer the following discussion relative to the perceived cost of a STEP system in Los Osos.

The "Viable Project Alternatives Fine Screening, dated August 2007. In the reports introduction it is stated that the report provided "information on what the community can expect through the County implemented solution, in terms of costs, benefits and overall approach". Presumably, this report was intended to be one of the primary documents that the residents of Los Osos will utilize in deciding their vote with regards to the County's Proposition 218.

When the public voted on the County's Proposition 218, it was our understanding that they were approving a not-to-exceed expenditure and not a project. Additionally, it is our observation that the residents of Los Osos had an expectation that the most economical approach would become the constructed project.

Prior to the release of the Fine Screening, Orenco Systems had already expressed concern regarding the omission of input that we provided. This omission of key data, while not necessarily important to the vote, was critically important towards defining the most cost effective STEP project that was ultimately analyzed in the Fine Screening Study. Despite Orenco's vast experience with STEP projects, the consultant and the County unilaterally defined the scope of a STEP project and ultimately, the project that they defined.

Subsequent to the release of the Fine Screening Study, in a public presentation, there was statement from the County Consultants that inferred that capital costs for STEP and gravity sewer would be comparable, while the coordination of STEP installation will be more difficult.

In our opinion, the fine screening did not provide a comparison of STEP and gravity costs that adequately supported the statements made on public record.

The following table is included in the Appendix "C" of the Fine Screening Analysis. This table explains the various Categories of Estimates with regards to the level of project definition and expected accuracy.

It is critical that the public understand the significance of this table. The STEP estimates from Carollo are stated to be Class 4 while the gravity sewer estimates are stated to be Class 1. The estimates for STEP are stated to be 1% to 15% of the total level of project definition required. Furthermore the accuracy of the estimate can be off by as much as 30% on the low side and 50% on the high side.

Based on the level of estimate provided, did a Class 1 estimate support the statement made by the consultant with regard to cost comparison? Furthermore, how could we conclusively state that STEP costs were actually comparable to gravity sewer? The public presentation contained no explanation regarding the potential variance in cost estimates.

The following table, also from Appendix "C" in the Fine Screening Study, further penalizes the STEP estimate for not being as accurate as the gravity sewer estimate.

Typically, contingency is added to projects in case unforeseen costs become applicable during construction. In the context of this analysis, Carollo has added 30% contingency to STEP because there has been less detail in the estimate. Comparatively, only 10% contingency is added to gravity as a reward for a more detailed estimate. Accordingly \$11,000,000 (low estimate) to \$15,000,000 (high estimate) is being added to STEP that isn't being added to gravity. In practicality, due to the complexity of construction, there is much more inherent risk in gravity sewer construction than STEP construction. Change orders, for unforeseen site condition are common in virtually all gravity sewer projects of this nature despite the level of detail put forth during design. Regardless of the level of estimate, it is highly questionable to assert that contingency should be higher for STEP. When a range of cost is presented, one has to understand that a large amount of subjective costs have been allocated to the cost of STEP, thereby inflating the possible range of cost.

Furthermore, the following table (Table 3.18), again from the fine screening analysis, shows that 15% overhead and 8% taxes are added to STEP while they are omitted from gravity. Since the gravity sewer estimate is more accurate, they have stated that the gravity sewer estimate includes these costs while presumably, they can not effectively say the same about their STEP estimate. This additional cost is added before contingency is added, so the impact of the overhead and taxes is compounded by the additional contingency.

Also in table 3.18, the low range cost shows the separate electrical premium. The electrical premium is contingent upon a hypothetical requirement from the State Water Board that would require a public electrical supply rather than a simple service through the existing homes electrical panel. In execution, virtually all existing STEP systems installed in this Country utilize power service from the home. While this could be included in the high end cost, we believe that the low end cost should be reflective of the methodology that is actually normally used to power a STEP pump package. The \$14,500,000 in additional cost again was added before contingency, so this arbitrary cost addition was compounded by the additional contingency that was added.

What did all of this mean to the voter? We believe there are two very important points to note. They are as follows:

- 1) If we use Table 1.1 to restate the potential cost range of the project, the numbers are very startling. The actual range for STEP, without compromising the integrity of this Study could actually be \$45.5 million to \$121.5 million while the actual range of gravity could be \$73.8 million to \$103.5 million. Accordingly, if these technologies were bid head to head, STEP could come in at \$45.5 million while gravity could come in at \$103.5 million and this report wouldn't be wrong. STEP in fact, by this report, could be half the cost of gravity. This potential variance in cost was never explained to the voter.

2) If the same level of estimate had occurred, one would presume that contingency, overhead and taxes would be treated comparably for both technologies. Orenco had provided bid tabs to the County, with overhead and profit included that support a cost that is lower than the stated low cost without overhead and sales tax. Also, if the low estimate actually utilized the probable low cost of electrical supply the low end cost would be significantly different. Without Sales Tax, Overhead, Electrical Premium and with 10% contingency, our calculations show that the low estimate would be in the range of \$44 million while the high estimate would be in the range of \$75 million.

We do not believe that this Fine Screening Analysis adequately provided proper "information on what the community can expect through the County implemented solution, in terms of costs, benefits and overall approach". The report did not compare STEP costs and gravity costs to the degree necessary to establish true comparative costs nor does it evaluate STEP on a level playing field with gravity sewer. We do not believe that an analysis that utilized different levels of estimating is adequate to support any determination that capital costs for STEP and gravity sewer are comparable. Furthermore, it is extremely misleading to apportion subjective costs such as sales tax, overhead, electrical premium costs and contingency in a manner that is not equitable between comparative technologies.

The consultant expended large resources in modeling treatment processes and in evaluating the cost of gravity sewer. We have to question why that the same level of resources was not applied to the STEP cost estimates so that a Class 1 estimate of STEP is available for comparison to the gravity sewer costs.

Our opinions were validated by an independent review that was done by the National Water Research Institute (NWRI). Their findings included the following:

- "Alternatives should be presented with sufficient detail in terms of description and estimated costs so that rational comparisons can be made."
- "Cost estimates should be stated clearly and compared on an equivalent basis with the same degree of variability and specificity. Refined and updated cost estimates are needed for each alternative so that decision makers and stakeholders can make informed judgments."

It does not appear that either of these NWRI recommendations was adequately addressed.

Beyond the estimates, we can take a more practical approach to discussing the provision of a STEP system in Los Osos. Orenco Systems, in the early stages of project development, recommended to the Los Osos Community Services District (LOCSD) that a Design Build approach be utilized for the procurement of a wastewater system for Los Osos. We told them that a Design Build approach, if properly executed, could deliver the ingenuity and expertise necessary to provide a low cost sewer option for Los Osos. At another meeting, we actually introduced the community to our potential Design Build team members that were ready to respond if a Design Build Request for Proposal was issued.

When the Design Build approach was finally recommended by County Staff, we believed that the process would move forward as promised. Unfortunately, during execution of the process, our

team was removed. We were not removed because of our teams competency or qualifications (we may have been the most highly qualified team involved), but by the recommendation of County Staff, we were removed because we recommended STEP wastewater collection as a viable method for reducing capital cost. In fact, during our presentation to County Staff, we stated the cost will be less and we will guarantee a not-to-exceed cost. Unfortunately, we were denied the opportunity to submit a proposal and therefore, we were denied the opportunity to make the ultimate not-to-exceed cost public.

At this time, the obvious question remains. Could STEP have delivered a low-end cost in the \$40 million dollar range? The Design Build team intended to work in partnership with the County, starting with the County defined STEP project, and then offering value engineering alternative that were intended to reduce the project cost. Value engineering alternatives included the following:

- The use of all or some of the existing septic tanks.
- The use of STEG (Septic Tank Effluent Gravity) systems when hydraulic conditional allowed.
- The use of alternative STEP pump packages that are available from Orenco.
- The use of decentralized treatment at sites that have a need for irrigation water.
- The use of shared interceptor tanks (2 and possibly 4 homes per tank).
- The use of community tanks in areas of high density.
- The use of remote system monitoring.
- The possibility of including an O&M service at a fixed cost.
- The possibility of utilizing an extended period for connecting customers that prioritized the "hot-spots" first.

These options were never explored by the consultant and were never conveyed to the public as alternatives for possible adjustments in capital cost.

Respectfully,

Mike Saunders

Orenco Systems, Inc.

www.orenco.com

Phone: (866) 914-9454

Cell: (941) 276-8586

October 14, 2008

John Waddell
San Luis Obispo County Dept. of Public Works
County Government Center, Room 207
San Luis Obispo CA. 93408

Subject: **TECHNICAL MEMORANDUM FOR GREENHOUSE GAS (GHG)
INVENTORY EMISSIONS**

Dear Mr. Waddell:

Orenco Systems, Inc. has reviewed the Draft Technical Memorandum Greenhouse Gas Inventory Emissions dated June 2008. This letter is intended to express our concerns and questions with regards to the statements and data presented in the Memorandum.

Overall, we have a general concern regarding the context and content of the Technical Memorandum. The GHG Technical Memorandum only looks at a project that is defined solely by the consultant and then does not quantify the potential inaccuracy in the data presented. Changes in project scope, combined with more detailed discussion of the GHG estimates can have a significant impact to the results stated. Accordingly, we do not believe that the data presented in this Technical Memorandum has merit in any decision making matrix or the pending environmental review process.

In support of our overall perception, we offer the following three comments for consideration:

First, neither the GHG Technical Memorandum, nor has the project screening process made any consideration towards alternative STEP system configuration or operating protocol. The viable project alternatives that were developed in the rough and fine screening analysis were developed unilaterally by Carollo Engineering. With over 25 years of experience in developing STEP collection systems, Orenco has never seen greenhouse gas emissions analyzed with the intent of being utilized in a decision making matrix. Accordingly, STEP systems have traditionally been designed with the intent of minimizing O&M costs, while maximizing system efficiency and reliability. If greenhouse gases are deemed critical in deciding on a collection and treatment process we are confident that a STEP system can be reconfigured with the intent of reducing greenhouse gas emissions.

Secondly, in our opinion, while the Fine Screening Analysis goes into great detail regarding the poor level of accuracy in cost estimates, discussion on the level of accuracy with regards to GHG emissions is completely omitted in this analysis. Why are we seeing an inconsistency? Conveniently, engineering effort was minimized in the STEP cost estimate so that the estimate variability could be 30% lower or 50% higher than the numbers stated. This estimate is directly compared with a gravity



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sewer estimate with more engineering effort that could be 10% lower or 15% higher. In our opinion, uncertainty in STEP pricing was utilized in the Fine Screening Analysis to avoid the possibility of a definitive cost differential.

Now, for the purposes of GHG emissions, results are presented in a definitive manner without discussion of any of the many issues that could significantly affect the accuracy of the estimates provided. The variability in accuracy of the data presented appears significant and should be discussed in detail.

Finally, this GHG Technical Memorandum does not specifically convey the potential inaccuracy in estimating methane emissions. Furthermore, it does not provide any discussion on global, U.S or California strategies with regard to quantifying and mitigating methane gas emissions from septic tanks. In our research, we were unable to find any GHG reduction plan in the United States that identifies methane from septic tanks as a meaningful target for GHG emission reductions. In 2005, the California Center for Clean Air Policy published a document entitled "Prospects for Participation of Methane Sectors in Emissions Trading Programs in California" and the word septic tank does not appear once in this 28 page document. The same document goes on to state that "most CO₂ emissions can be viewed as *co-product emissions*, where the amounts of CO₂ are directly and immediately related to the activity's inputs, particularly fossil fuel consumption. In contrast, most methane sources are *incidental emissions*, being either accidental releases or related to variable biological or geological processes. The resulting differences, particularly the differences in measurability (discussed below), have important implications for the feasibility of including these incidental emissions sources into a broader GHG trading system. A key factor in determining the proper approach is *measurability*. Because methane emissions tend to be incidental to the activity causing the emissions, estimates of methane emissions are substantially more uncertain and difficult to measure than those for carbon dioxide. Contributing to the difficulty of measurement is that methane emissions often arise from many diffuse points, often small individually but collectively large. This uncertainty has implications for including methane in the trading system. When emissions from a source cannot easily be measured, it becomes more difficult to determine how many allowances that source should have in an allowance-based trading system".

Rather than providing a thorough and constructive look at GHG gases, this document appears to utilize a weekly defined STEP project and combines this with poorly documented protocols for estimating GHG emissions to achieve the conclusions that are stated.

With respect to the Memorandum we also have some more detailed concerns. They are as follows:

- 1) The approach used for calculating septic tank methane emissions is based on an approach for Global GRG inventories. This method is a generic approach and does not consider issues such as sludge pump-out intervals, ground temperature, methane capture, etc.
- 2) The technical memorandums have continued to exploit Methanol addition for the purpose of denitrification to justify substantial increases in capital cost, O&M cost and now greenhouse gas emissions. The analysis only considers options that will require denitrification to meet nitrogen levels of 7 mg/L while agricultural exchange and urban reuse could be considered as options to decrease the level of denitrification required.
- 3) While several options were considered for biosolids handling and disposal, none were specifically recommended. Now, this Technical Memorandum only considers third party composting. This choice appears to have been made out of convenience to reduce the GHG

emissions that could be associated with other biosolids disposal options.

- 4) The equivalent CO₂ emission for the production of methanol appears to be severely overstated. Additionally it fails to consider other potential carbon sources that could be more GHG friendly.
- 5) Table 2, the annualized equivalent CO₂ emissions resulting from the processing and production of construction materials, is heavily weighted on PVC production. A STEP system is predominantly 2" diameter piping while a gravity sewer system is predominantly 8" piping. Based on the large difference in pipe sizing we would expect a correspondingly large variance in equivalent CO₂ emissions associated with plastic piping.
- 6) The GHG emissions for construction related impacts are annualized over 30 years. Why are these impacts annualized and why 30 years? If the results were annualized over 10 years the reported impact would be three times as high. Construction impacts are much larger for gravity than STEP. Was this done to reduce the annualized GHG emissions for gravity sewer?
- 7) Why was complete build-out utilized for methane production from STEP tanks? This adds more than 2,000 tanks to the existing inventory. It is completely inconsistent that gravity sewer has construction impacts spread over 30 years while STEP has a non-existent impact brought forward to every year including year 1.
- 8) The equivalent CO₂ emissions for STEP system construction presumably assumes that all tanks are replaced, that there is one tank per household and is based on construction methodologies that Orenco has already stated to be incorrect.

Detailed discussion of each concern follows:

- 1) *The approach used for calculating septic tank methane emissions is based on an approach for Global GRG inventories. This method is a generic approach and does not consider issues such as sludge pump-out intervals, ground temperature, methane capture, etc.*

Domestic wastewater methane emissions in the United States are estimated using the default IPCC methodology. 2006 IPCC Guidelines for National Greenhouse Gas Inventories stated that "below 15°C, significant CH₄ production is unlikely because methanogens are not active. The same document states that "Frequent solids removal reduces CH₄ production".

Ground temperatures in Los Osos are below 15°C and pump-out intervals are analyzed at 5 years. Based on IPCC Guidelines, it may be appropriate to state that methanogens may not be established.

If methanogens are established, it may take up to three years for a methanogenic phase to establish itself in a septic tank. Accordingly, actual methane monitoring and a pump-out cycle that is intended to reduce or eliminate methane emissions appears to be reasonable approach in mitigating methane production from vented tanks.

- 2) *The technical memorandums have continued to exploit Methanol addition for the purpose of denitrification to justify substantial increases in capital cost, O&M cost and now greenhouse gas emissions. The analysis only considers options that will require denitrification to meet nitrogen levels of 7 mg/L while agricultural exchange and urban reuse could be considered as options to decrease the level of denitrification required.*

The feasibility of Agriculture Exchange has been deferred from immediate consideration because it has been assumed that current Agriculture users will not be cooperative. Given the extensive costs and now the GHG emission being attributed to STEP solely because of Nitrogen reduction, it appears that this issue requires far more investigation. It would be interesting to see the final cost and GHG emission calculations for a system that utilized agriculture exchange for Nitrogen reduction.

- 3) *While several options were considered for biosolids handling and disposal, none was recommended. Now, this Technical Memorandum only considers third party composting. This choice appears to have been made out of convenience to reduce the GHG Emissions that could be associated with other biosolids disposal options.*

The Solids Handling Technical Memorandum does not appear to establish a definitive method for solids handling. The same document makes no mention of a third party composting operation. Now, this analysis utilizes GHG emissions generated from the transport of Sub-Class B biosolids to a composting facility, McCarthy Family Farms in Kings County, CA, which is about a 130-mile trip. Was this method integrated into the viable projects for the purpose of reducing GHG emissions?

The McCarthy Family Farms web site indicates that this site only has limited capacity for new customers.

The analysis assumes that the windrow will be maintained in an aerobic state. Additionally, the analysis does little to verify on-site GHG emissions that may be associated with processing and handling.

Since the biosolids handling method has not been established, it would appear necessary to discuss GHG emissions should other methods of biosolids disposal be utilized. It is expected that other methods of biosolids disposal could create a significant increase in GHG emissions.

- 4) *The equivalent CO2 emission for the production of methanol appears to be severely overstated. Additionally it fails to consider other potential carbon sources that could be more GHG friendly.*

We contacted the Methanol Institute to see if they had up-to-date information regarding GHG emissions that can be associated with the production of methanol. They reported in writing that methanol production has seen significant reductions in GHG emissions. They stated that plants are producing Methanol with a GHG emission rate of 3.8 lbs of equivalent CO2 per gallon of methanol produced. This analysis appears to have utilized 13.9 lbs of equivalent CO2 per gallon of methanol produced. Additionally, methanol consumption is based on proprietary modeling that has not been provided for review. Finally, like the methane generated from septic tanks, the methanol consumptive rate is based on full build-out rather than existing flow rates. Again, GHG emissions for year 1 of STEP are being loaded with GHG emissions that may or may not ever exist..

- 5) *Table 2, the annualized equivalent CO2 emissions resulting from the processing and production of construction materials, is heavily weighted on PVC production. A STEP system is predominantly 2" diameter piping while a gravity sewer system is predominantly 8" piping. Based on the large difference in pipe sizing we would expect a correspondingly large variance in equivalent CO2 emissions associated with plastic piping.*

The paper entitled *Life Cycle Inventory of the Production of Plastic Pipes for use in Three Piping Applications* prepared for the Plastic Pipe and Fittings Association

stated that the "Weight per unit length of pipe is a key factor in all LCI results. Lighter pipes generally have lower environmental burdens". We have estimated that the weight of gravity sewer pipe more than doubles the weight of the STEP piping. This should appear reasonable since STEP systems will predominantly utilize 2" piping while gravity sewer will utilize 8" piping. The Technical Memorandum shows STEP equivalent carbon dioxide emissions are slightly less than 70% that of gravity, we believe that STEP is actually less than 50% that of gravity. --Also, based on information contained in the same report, the CO2 emissions associated with PVC pipe appear to be significantly understated.

- 6) *The GHG emissions for construction related impacts are annualized over 30 years. Why are these impacts annualized and why 30 years? If the results were annualized over 10 years the reported impact would be three times as high. Construction impacts are much larger for gravity than STEP. Was this done to reduce the annualized GHG emissions for gravity sewer?*

GHG emissions, associated with construction related activities appear to be a significant weakness for gravity sewer. Annualizing the impact over 30 years significantly reduces the impact relative to the outcome. If the data is not annualized, or if it is annualized over a shorter period of time, the impact to the analysis would be far more notable.

- 7) *Why was complete build-out utilized for methane production from STEP tanks? This adds more than 2,000 tanks to the existing inventory. It is completely inconsistent that gravity sewer has construction impacts spread over 30 years while STEP has a non-existent impact brought forward to every year including year 1.*

Utilizing build-out numbers for STEP appears to be an effort to leverage STEP's GHG emissions for vented tanks. The initial GHG emissions should be quantified for comparison with the potential long-term increases in GHG quantified separately. We would suggest that gravity sewer should also include long term impacts that are caused by I&I (methanol use, pumping, repairs, etc). The consultant and the County recently visited the Scott's Valley WWTP. The tertiary treatment facility at Scott's Valley will spend \$15,000/yr on Methanol according to their 2008/2009 proposed budget. This equates to approximately 5,000 gallons of methanol per year. They only send about 200,000 gpd through tertiary treatment and the rest goes to an Ocean outfall. At .8 MGD flow Carollo has STEP at approximately 33,000 gallons per year in Methanol. Should gravity actually be in the range of 20,000 gallons? Also, outside the Methanol quantity shouldn't all of the other O&M as well as capital costs be applied? To be consistent with the STEP evaluation should the long term likelihood of Methanol use be applied in every year of the analysis?

- 9) *The equivalent CO2 emissions for STEP system construction presumably assumes that all tanks are replaced, that there is one tank per household and is based on construction methodologies that Orenco has already stated to be incorrect.*

Again, the project has been pigeon holed by the author of this technical memorandum. We would suggest that a more intense tank pumping schedule that is aimed at reducing GHG emissions could redefine the strategy relative to tanks. A frequent pumping schedule would reduce the benefit of having larger tanks. Accordingly, we would suggest that many of the existing tanks could be utilized.

While we don't profess to be experts in GHG emissions, we did take the liberty to rework the analysis, based on a 3 year pump-out interval, our revised take-off on quantities of PVC piping, the utilization of existing tanks and the equivalent CO2 numbers provided by the methanol institute

	Energy	Construction	Chemical Production	Construction Material Handling	Solids & Septage Handling	Chemicals Handling	STEP - Septic Tank Venting	Total
Existing	0	0	0	0	26	0	1,249	1,276
Alt 1 - Gravity	769	622	48	106	106	30	0	1,682
Alt 2 - STEP	550	295	43	72	26	31	100	1,117
Alt 3 - Gravity	658	601	47	125	106	30	0	1,567
Alt 4 - STEP	465	282	43	86	26	31	100	1,033
Alt 5 - Gravity	656	606	43	161	17	28	0	1,511
Alt 6 - STEP	561	285	42	128	18	28	100	1,162

While we're not suggesting that our table is necessarily the correct interpretation, we felt that it was important to show how the utilization of different project protocols can have a profound impact on the outcome. We would contest that the GHG emission presented in the Technical Memorandum are meaningless without proper definition of the project and the science behind the analysis.

We hope that these comments are helpful in evaluating the issues discussed.

Respectfully,



Michael Saunders
 Compliance Program Manager
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SUPPORT DOC. C2

May 27, 2009

Department of Planning and Building
Attn: Ms. Sarah Christie
Chairperson SLO Planning Commission
976 Osos Street, Room 300
San Luis Obispo, CA. 93408

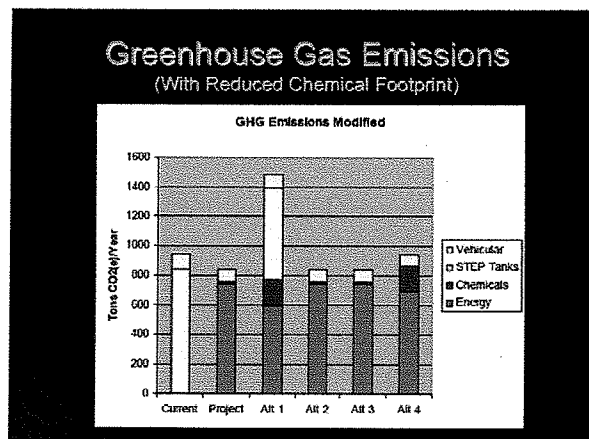
Subject: **Green House Gas (GHG)**

Honorable Planning Commissioners:

On April 30, 2009, San Luis Obispo County Staff presented data that was intended to convey gravity sewer wastewater collection system as a much lower producer of GHG emissions than a comparable STEP (Septic Tank Effluent Pump) wastewater collection system. Subsequent to the staff presentation, Carollo Engineering, on behalf of the County, has prepared a GHG Technical Memorandum. Orenco Systems, Inc. has reviewed the data and believes that the data has been manipulated and misrepresented with the apparent intent of supporting a gravity sewer project. Specifically, data has been misrepresented in the following ways:

- 1) Significant GHG emissions associated with gravity sewer construction have been presented with the apparent intent of hiding the magnitude of this GHG impact.
- 2) Theoretical methane emissions from septic tank venting have been exploited to the maximum extent possible with the apparent intent of promoting high GHG emissions for STEP systems.

The staff presentation included the following graphic comparing GHG emissions for the four project options.



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For reference, Alternative 1 is the only collection/treatment option that includes STEP collection. Also, it is important to note that this comparison is not a comparison of STEP and gravity but is actually a comparison of project alternatives that are inclusive of dissimilar treatment strategies.

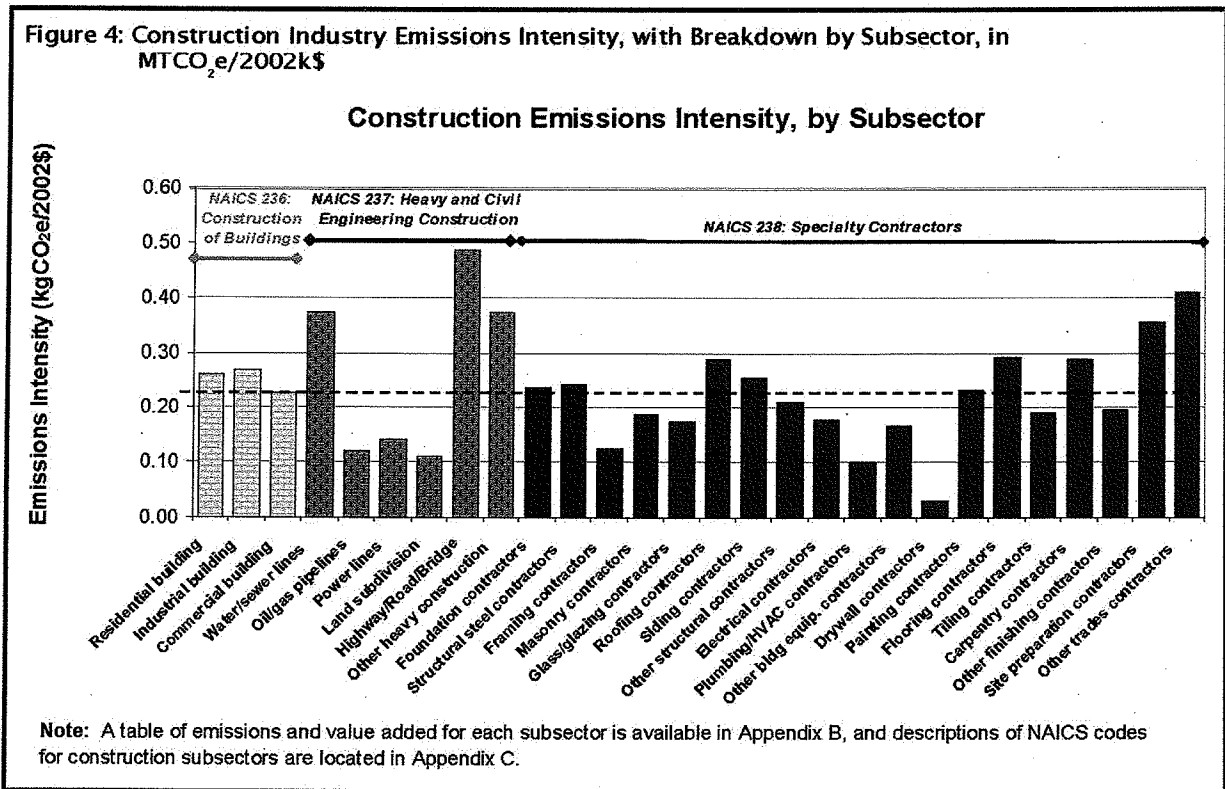
Orenco Systems, Inc. previously provided comments regarding the GHG Technical Memorandum that was prepared by Carollo Engineering. A copy has been attached for reference. To-date, our comments have not been addressed, nor has the Technical Memorandum been finalized. Much to our dismay, the Technical Memorandum has been conveyed publically as a finalized document that labels STEP collection as an inferior option for wastewater collection when comparing GHG emissions with conventional gravity sewer.

Discussion of our two major concerns regarding the presentation of data follows:

Construction Related GHG Emissions:

GHG emissions data, first presented by Carollo Engineering in the Technical Memorandum, and now being presented by staff has minimized the impact of GHG emissions associated with construction activities. In fact the staff presentation appears to avoid any discussion of GHG emissions associated with construction activities altogether. Construction GHG emissions are largely associated with fossil fuel consumption, electrical consumption, material production and material transportation.

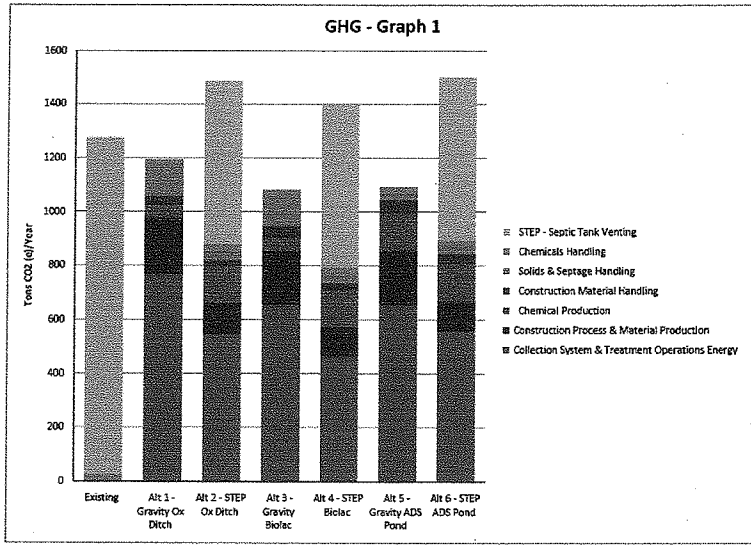
The GHG emissions associated with construction of the gravity sewer options are extremely large. In rough numbers, STEP construction related GHG emissions are approximately 1/2 that of gravity sewer. In February of 2009, the EPA authored a document entitled "Potential for Reducing Greenhouse Gases in the Construction Sector". Figure 4 of this document shows water/sewer construction as one of the most intensive producers of GHG emissions per dollar spent. Figure 4 is included below for reference.



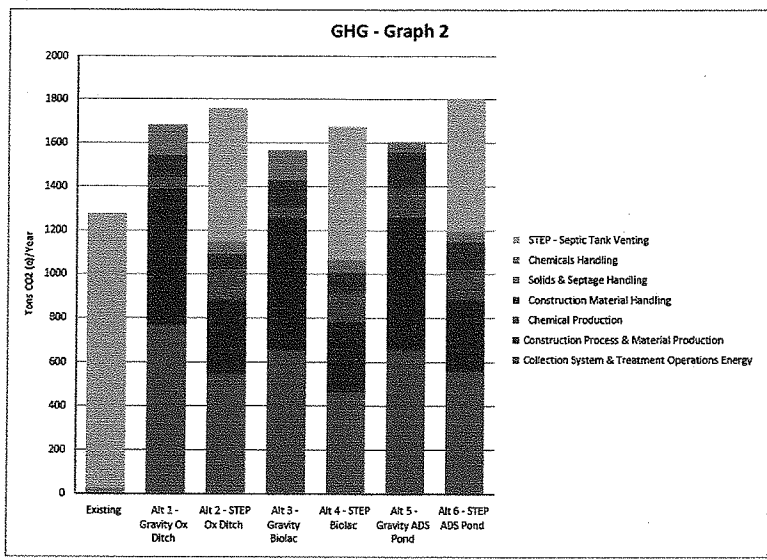
Despite the significant GHG emissions associated with gravity sewer construction, the GHG Technical Memorandum included a methodology that appears to hide the magnitude and overall impact. The analysis annualized the immediate construction related impacts over a 30 year period. Essentially, they took an immediate and very large impact and averaged it over 30 years.

Through numerous literature reviews of pertinent GHG inventory guidelines we have been unable to find any support for the annualization of construction related GHG emissions. Furthermore the annualization of construction GHG emissions fails to support Green Building initiatives.

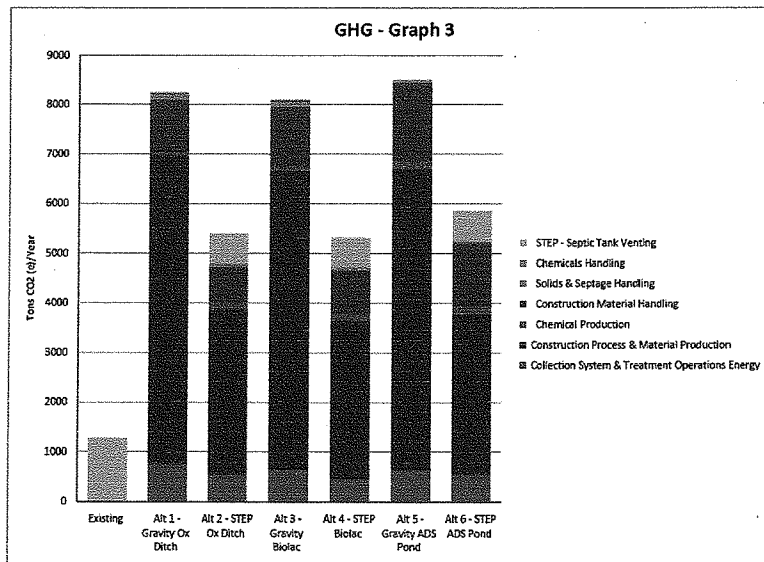
Graph 1, produced by Orenco Systems and shown below, includes GHG emissions associated with construction and annualizes them over 30 years. As you can see, annualizing this impact has made the two applicable impacts (construction material handling, construction & material production) appear to be marginally significant in the overall accumulation of GHG emissions. By this apparent manipulation of data, the benefits of STEP collection construction and material handling are hidden from the reader by making gravity sewer construction and material handling less significant in the annual emissions. Again remember, the GHG emissions for construction have been divided by 30 which makes gravity sewer annual emissions smaller relative to the other impacts.



If we simply change the annualization period for the construction impacts to 10 years, the outcome of the analysis changes significantly. Graph 2, shown below was developed by changing the annualization period from 30 years to 10 years. At 10 years, the gravity sewer options have changed significantly and the construction related GHG emissions are a dominant impact to the outcome of the analysis. We're not speculating that 10 years is an appropriate annualization period, we're simply trying to show how a subtle change in the approach can change the outcome significantly.



To further demonstrate this issue, we could restate the GHG impact of construction related activities without annualizing the data. Graph 3 shows the GHG emissions for construction related activities as an initial impact. Without annualizing the construction related impacts, the construction related GHG emissions are the dominant factor that affects the outcome of the GHG analysis. At the very least, it becomes very obvious that the construction related GHG emissions should not be ignored in the overall discussion. In rough numbers, the construction related GHG emissions are equal to approximately 7 years of operations GHG emissions.



We believe that construction related GHG emissions should be detailed and evaluated separate from operational GHG emissions. Again, in rough numbers, any alternative inclusive of STEP collection would have approximately 1/2 the construction GHG emissions when compared to gravity sewer based options. If GHG construction emissions of STEP collection was compared directly with gravity collection (no treatment), we believe STEP would be much lower than 1/2 of the of gravity.

Methane from Vented STEP Tanks:

Our second major issue is with the leverage staff has capitalized on with regards to septic tank venting. It has become very clear that their case is solely built on leveraging vented STEP tanks as the overriding concern in a GHG comparison. Methane gas, having a GHG impact that is 21 times that of CO₂ can have a drastic impact on the overall GHG computation with very subtle changes in the quantity of methane discharged. This became apparent when the GHG calculations for gravity sewer utilized a methodology that would truck biosolids 100 miles away to a compost site rather than use local landfilling or land application. Essentially, CO₂ emissions for hauling were lower than risking any methane impacts from biosolids.

Our comments on the technical memorandum questioned the magnitude of the STEP tank methane being produced. We questioned the inconsistency between the construction impacts and the methane STEP tank emissions. While construction impacts were averaged over 30 years, septic tank emissions were derived from day one, assuming non existing tanks that would materialize upon full build out. A real and immediate impact in the gravity sewer column was averaged, while a nonexistent impact from nonexistent STEP tanks was utilized in day one of the analysis.

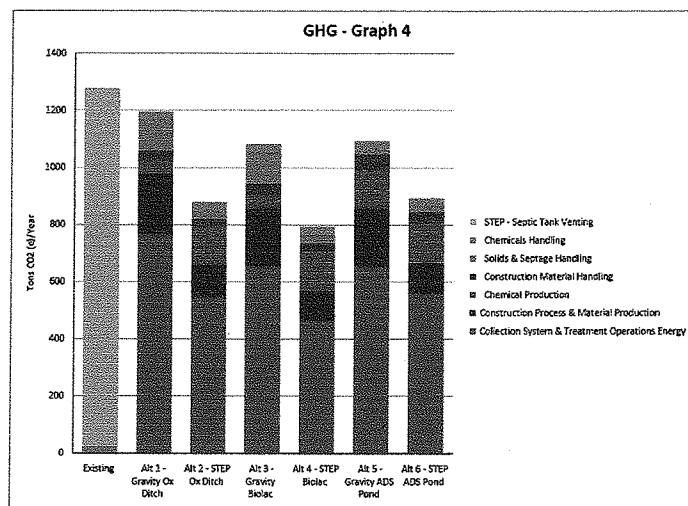
We also questioned the science behind methane production as ground temperatures in the Los Osos region do not support methane production. Furthermore, more frequent pump-out intervals can also be utilized should methane production occur. It is critical to note that the accuracy of GHG emissions must be verifiable. We do not believe that the quantity of methane gas from vented STEP tanks is accurate nor is it verifiable.

During the Design/Build interview we provided a mitigation strategy that was intended to identify and terminate methane emissions should they occur. Given the uncertainty in this emission, this strategy would provide actual data that could be utilized in a GHG inventory. Mr. Hutchinson was on the interview team and should be familiar with the mitigation strategy presented. Essentially, we proposed to measure methane production from STEP tanks with readily available

monitors. This monitoring would be added to the proposed preventative maintenance schedule. If methane production was measured from tank vents, we would proactively pump the tank of solids. We understand that Mr. Hutchinson acknowledged this strategy but pointed to the negative impact (more truck traffic) of a more aggressive pump-out schedule. Again, the GHG Technical Memorandum utilized 100 mile trips to dispose of gravity sewer biosolids to avoid methane production. If Mr. Hutchinson has a problem with the truck traffic, we would suggest that methane be quantified for local biosolids handling.

It is very important to note that a more aggressive pump-out schedule may not be necessary. Furthermore, we proposed that a more aggressive pump-out schedule could be handled with a dewatering septic truck to significantly reduce the number of pump-out trips. Finally, despite our recommendation of 10 year pump-out intervals, the GHG emissions are already based on an aggressive 5 year pump-out interval. If 5 years became 3 years, we don't believe that the impact to the overall GHG calculation would be significant.

In the overall production of GHG emissions, the elimination of any potential Methane emission, partnered with a lower impact methodology for sludge handling would generate a significantly different outcome than the analysis completed by staff. Graph 4 demonstrates the comparison of GHG emissions when methane gas is mitigated. Please note that the significance of the solids handling, with regards to GHG emissions is minimal. Also note that this graph utilizes a 30 year annualized construction impact for GHG emissions.



The EIR readily uses mitigation strategies for very significant environmental impacts associated with gravity sewer. The EIR makes no effort to consider or document any mitigation strategy for a STEP option. The mitigation strategy presented is reasonable, low cost and should have been considered.

We do not believe GHG emissions for STEP operation to be higher than gravity sewer.

Thanks for taking the time to consider these comments. You can reach me (800.718.4046) or Mike Saunders (866.914.9454) anytime.

Sincerely,

Michael Saunders
National Accounts Manager

Appeals - COASTAL guide

San Luis Obispo County Department of Planning and Building

7/01/09

Many actions taken by the Department of Planning and Building staff, Building Official may be appealed. Actions by the Planning Department Hearing Officer, Subdivision Review Board, or Planning Commission, to approve or deny a permit application, may be appealed by the applicant or member of the public. In the Coastal Zone, many actions can also be appealed to the California Coastal Commission.

If you wish to appeal a decision, an appeal form must be completed and received by the Records Management Division accompanied by the required fee no later than 14 calendar days after the action, or 7 calendar days after the approval of a "Site Plan" type of land use permit.

Please state the reasons for your appeal as clearly as possible, setting out all of the facts, conditions, and considerations concerning your case under the section entitled "Basis for Appeal" on the form. You may, if you wish, submit a more detailed letter in addition to the required form.

After an appeal has been filed, staff will prepare a response and schedule an appeal hearing. The hearing will be held by the Planning Commission, Board of Supervisors or other Review Authority whichever is so specified under the appropriate Ordinance. You will be notified by mail of the date, time and place of the hearing. It is best that you attend the scheduled appeal hearing so that you may answer any questions that may arise concerning the application and the appeal.

If you are filing an appeal in the Coastal Zone on development not appealable to the California Coastal Commission or on appealable development that is not based upon specific Coastal Act grounds please use the Coastal Form. If however you wish to appeal an appealable coastal project based upon Coastal Zone grounds then you must use the form entitled Coastal Appealable Form.

FEES

When an appeal is requested the following fees apply, depending on which Review Authority you are before, and what type of application you are processing. The fees cover the cost of advertising and mailing, as well as staff evaluation of the appeal and staff report preparation.

APPEALED FROM	APPEALED TO	FEE
Staff Curb, Gutter & Sidewalk Waiver- \$ If waiver is denied	Board of Supervisors	\$ 312.00
Planning Director Interpretation	Planning Commission	\$ 616.00
Planning Director Public Facilities Fees	Board of Supervisors	\$ 616.00
Planning Director Growth Management Ordinance	Planning Commission	\$ 691.00 + RTB
Building Official	Board of Construction Appeals Board of Handicapped Access	\$ 616.00
Subdivision Review Board	Board of Supervisors	\$ 616.00
Hearing Officer	Board of Supervisors	\$ 616.00
Planning Commission	Board of Supervisors	\$ 616.00

* RTB means the applicant will be billed for costs in excess of fees collected

If you have any questions, please contact the Records Management Division at (805) 781-5718.

COASTAL appeal form

San Luis Obispo County Department of Planning and Building

7/01/09

Please Note: An appeal should be filed by an aggrieved person or the applicant at each stage in the process if they are still unsatisfied by the last action.

PROJECT INFORMATION Name: _____ File Number: _____

Type of permit being appealed:

- Plot Plan Site Plan Minor Use Permit Development Plan/Conditional Use Permit
 Variance Land Division Lot Line Adjustment Other: _____

The decision was made by:

- Planning Director (Staff) Building Official Planning Department Hearing
 Subdivision Review Board Planning Commission Other _____

Date the application was acted on: _____

The decision is appealed to:

- Board of Construction Appeals Board of Handicapped Access
 Planning Commission Board of Supervisors

BASIS FOR APPEAL

State the basis of the appeal. Clearly state the reasons for the appeal. In the case of a Construction Code Appeal, note specific code name and sections disputed). (Attach additional sheets if necessary)

List any conditions that are being appealed and give reasons why you think it should be modified or removed.

Condition Number _____ Reason for appeal (attach additional sheets if necessary)

APPELLANT INFORMATION

Print name: _____

Address: _____

Phone Number (daytime): _____

We have completed this form accurately and declare all statements made here are true.

Signature

Date

OFFICE USE ONLY

Date Received: _____

By: _____

Amount Paid: _____

Receipt No. (if applicable): _____

Coastal appealable form

San Luis Obispo County Department of Planning and Building

701/09

Please Note: An appeal should be filed by an aggrieved person or the applicant at each stage in the process if they are still unsatisfied by the last action.

PROJECT INFORMATION Name: _____ File Number: _____

Type of permit being appealed:

- Plot Plan Site Plan Minor Use Permit Development Plan
 Variance Land Division Lot Line Adjustment Other: _____

The decision was made by:

- Planning Director (Staff) Building Official Planning Department Hearing
 Subdivision Review Board Planning Commission Other _____

Date the application was acted on: _____

The decision is appealed to:

- Board of Construction Appeals Board of Handicapped Access
 Planning Commission Board of Supervisors

BASIS FOR APPEAL

INCOMPATIBLE WITH THE LCP. The development does not conform to the standards set forth in the Certified Local Coastal Program of the county for the following reasons (attach additional sheets if necessary).

Explain: _____

INCOMPATIBLE WITH PUBLIC ACCESS POLICIES. The development does not conform to the public access policies of the California Coastal Act - Section 30210 et seq of the Public Resource Code (attach additional sheets if necessary).

Explain: _____

List any conditions that are being appealed and give reasons why you think it should be modified or removed.

Condition Number _____ Reason for appeal (attach additional sheets if necessary)

APPELLANT INFORMATION

Print name: _____

Address: _____ Phone Number (daytime): _____

I/We are the applicant or an aggrieved person pursuant to the Coastal Zone Land Use Ordinance (CZLUO) and are appealing the project based on either one or both of the grounds specified in this form, as set forth in the CZLUO and State Public Resource Code Section 30603 and have completed this form accurately and declare all statements made here are true.

Signature _____

_____ Date

OFFICE USE ONLY

Date Received: _____

Amount Paid: _____

By: _____

Receipt No. (if applicable): _____

LOGS Appeal of the LOWWP EIR and Coastal Development Permit, August 24,

Page 1 or 10

Basis for Appeal:

As planned (by the San Luis Obispo County Public Works Department) and conditioned (by the County Planning Commission), the Los Osos Wastewater Project (LOWWP) does not conform to key provisions of the Local Coastal Program (LCP) and it violates related sections of the Coast Zone Land Use Ordinance (CZLUO), in part due an inadequate environmental review for the project. Therefore, the Coastal Development permit should be denied pending further environmental review, modification of the project and/or planned phasing of the project.

Fails to adequately assess, mitigate and/or avoid impacts to groundwater, and provide for orderly coastal development

Need for assessment of SWI and sustainability of the basin: The LOWWP's potential negative impacts on SWI have been recognized from the beginning of the project review process. The preferred alternative (before Planning Commission changes) provided mitigation for the project with Broderson leach fields and 10% conservation by 2020. Broderson is supposed to replace the basin recharge benefits of about 1000 AFY of septic return flows with 250-450 AFY of recycled water discharged in one location.

The Planning Commission recognized the need for a safer level of SWI mitigation for the project, adding conditions for stronger indoor conservation and beneficial reuse programs, among other conditions (e.g., 1, 97, 100, 103 & 108) The Coastal Commission and Regional Water Board have supported stronger conservation and reuse programs for the project.

Even with Planning Commission conditions, the basin's ability to sustain the project remains in question. Recent water quality tests from the Palisades Well (a main community drinking supply well) show SWI has reached the middle of Los Osos and might be accelerating. Data from the 2005 SWI Assessment (Cleath and Associates—Figure 5) show very low water levels at the Palisades location, extending through much of the lower aquifers. These facts raise the question of whether it is possible to stop SWI before it contaminates the remainder of the lower aquifers in the Urban Compartment (about two-thirds of the freshwater basin). Adding to concerns, SWI has been progressing through the lower aquifers unchecked since the 1980's despite a Level of II severity declared in 1992, various purveyor cooperative efforts, and a Level of III designation in 2007.

Recently, new basin studies have emerged from the adjudicated basin planning process involving water purveyors. The process is proceeding under a cooperative arrangement known as an interlocutory stipulated judgment or ISJ. According to Rob Miller, consultant to the purveyors (who presented the studies on July 30 at a combined meeting of the LOCSD and LOCAC), the studies show SWI can be stopped if most of the pumping from the lower aquifer is shifted to the upper aquifer (about 900 AFY). Mr. Miller also said the studies indicate the basin can be balanced without the project.

However, the ISJ studies assume pumping from the upper aquifer can exceed safe yield levels identified in the 2007 *Resource Capacity Study* by 40% (1600 AFY versus 1150 AFY). The 2005 SWI assessment indicates the upper aquifer is only "relatively stable," subject to seawater intrusion during periods of extended drought (p.27). Also, the LOWWP will have its greatest impacts on the upper aquifer (and upper water zones). With the purveyor plan, substantial increased pumping from the upper aquifer will occur as the aquifer undergoes major impacts from the project. Finally, private well use (residential and farming)—amounting to one-third or more of basin water use—is

based on estimated use, rather than actual monitoring. This is inconsistent with LCP Policy 3 (see below). A letter from the Coastal Commission to County Public Works dated July 15 expresses doubt that purveyor plans will adequately address SWI. These studies will not dispel that concern. They appear to be very preliminary, raising many questions about assumptions, data, and parameters used; also, the studies do not considered alternatives (e.g., scenarios applying conservation and reuse options).

Not only will the LOWWP cause significant impacts on upper and lower aquifers, but it will cause impacts on limited water supplies during construction (e.g., dust control) and for collection system maintenance (e.g., flushing lines). The project will also significantly reduce groundwater flows to environmentally sensitive ecosystems and may lead to additional water use in Los Osos property owners attempt to maintain landscaping and vegetation once septic flows are stopped (see below).

All assumptions about the progress of SWI, adequate project mitigation, and the basin's ability to sustain the project were made prior to the Palisades test sample. Assessing whether the Los Osos Valley Water can sustain the LOWWP, whether the basin is sustainable at all, and whether the project is viable (i.e., can achieve its water quality objectives) require further assessment using current and complete well test data, as well as a thorough analysis of all water resource impacts from the project. This is necessary for deciding the most appropriate capital improvements and orderly coastal development consistent with the County General Plan (Chapter 3 "Relationship to Planning Policies and Programs") and LCP Public Works Policies 1, 5, and 6. It is also necessary for compliance/conformance with the following CZLUO section and LCP policies:

CZLUO 23.04.430: "Availability of water supply and sewage disposal services.

A land use permit for new development that requires water or disposal of sewage shall not be approved unless the applicable approval body determines that there is adequate water and sewage disposal capacity available to serve the proposed development, as provided by this section.

LCP Coastal Watershed Policy #1: "Preservation of Groundwater Basins"

"The long-term integrity of groundwater basins within the coastal zone shall be protected. The safe yield of the groundwater basin, including return and retained water, shall not be exceeded except as part of a conjunctive use or resource management program which assures that the biological productivity of aquatic habitats are not significantly adversely impacted."

LCP Coastal Watershed Policy #2: "Water Extractions"

"Extractions, impoundments and other water resource developments shall obtain all necessary county and/or state permits. All pertinent information on these uses (including water conservation opportunities and impacts on in-stream beneficial uses) will be incorporated into the data base for the Resource Management System and shall be supplemented by all available private and public water resources studies available. Groundwater levels and surface flows shall be maintained to ensure that the quality of coastal waters, wetlands and streams is sufficient to provide for optimum populations of marine organisms, and for the protection of human health."

LCP Coastal Watershed Policy #3: "Monitoring of Resources"

In basins where extractions are approaching groundwater limitations, the county shall require applicants to install monitoring devices and participate in water monitoring management programs.

LCP Coastal Watershed Policy #5: "Los Osos Groundwater Management"

The county Planning and Engineering Departments should work with communities, property owners and the Regional Water Quality Control Board to develop and implement a basin-wide water management program for the Los Osos groundwater basin which addresses:

- existing and potential agricultural demand
- urban expansion in relation to water availability
- groundwater quality
- possible need for alternative liquid waste disposal
- protection of aquatic habitats including coastal waters, streams and wetlands.

The Resource Management System of the Land Use Element provides a framework for implementing this policy and an interim alert process for timely identification of potential resource deficiencies, so that sufficient lead time is allowed for correcting or avoiding a problem."

Need for a basin-wide management plan and accurate water use monitoring: As the above LCP policies state, a basin-wide water management program is essential to protect Los Osos groundwater resources. This should include monitoring all water use. Prohibition Zone property owners use about one-half of the water in the basin. Purveyors supply all the water for Prohibition Zone use, but control only about two-thirds of the pumping in the basin. Private well use (residential and farm) accounts for the other one-third. Usage for the latter category is not well-documented due to a lack of monitoring. To effectively address the SWI requires a basin-wide solution. For it to be effective in the near future, a basin-wide plan implemented with a basin-wide ordinance is needed—and it must be a condition of project approval.

The LCP (*Coastal Plan Policies*) states "In the critical groundwater basins, management programs must be completed" (9-8) (emphasis added). The Level II of Severity resource deficiency declared in 1992 and the above LCP policies, in place since 1995, have given ample time for these critical management measures to be implemented. Thorough resource assessment and monitoring—along with a basin-wide management program—are essential to basin sustainability, the viability of the project, and orderly coastal zone development. The promotion of orderly development is a key purpose of the CZLOU: "To regulate land use in a manner that will encourage and support the orderly development and beneficial use of lands within the county..." [(Section 23.01.010 "Title and purpose" (4)].

Need for consideration of other project alternatives and options: Based on the results of a SWI assessment and monitoring of water use, the project may need to be decentralized and/or phased to enable the basin to support the project and optimize limited public funding. The ultimate goal is to provide a sustainable water supply to support area ecosystems and the community. How this can be accomplished cost-effectively requires further assessment and analysis. At the end of this appeal, we suggest consideration of a decentralized system collecting from homes near the bay and in high groundwater, with many upgraded septic systems left in place. This, we believe, will achieve virtually all the ground water quality benefits of a centralized system while maintaining ground water flows to sensitive habits and vegetation in the area, at about one-third the cost. A basin-wide

management program emphasizing and integrated water use efficiency program (including intense indoor-outdoor conservation, LID recharge, ag exchange, and urban reuse) should be a condition of any project approved (see "Project Conditions Needed").

Also further analysis is needed of Broderson leach fields as a water management option. This option is costly and causes many impacts to environmentally sensitive habitat, requiring a considerable amount of mitigation. It is also energy intensive (i.e., for pumping the water up to the site. Additional, assessment of basin water supplies and water management options may determine SWI can be stopped more effectively using other options. According to the *Fine Screening Report* and EIR, conservation, ag exchange, and urban are more than twice as effective in stopping SWI (i.e., Broderson leach fields assigned a .22 mitigation factor and conservation, ag exchange, and urban reuse have .55 mitigation factors). If money can be spent more effectively to reduce SWI support sensitive ecosystems with other water management options, Broderson leach fields should not be developed.

Need for accurate flow estimates and treatment phasing: To enable orderly development, which does not put a strain on coastal resources, flow estimates for the project must reflect accurate current usage and accurate usages with planned conservation. None of the conditions set in the Development Permit identify and/or limit flows to reasonable projections for the project. This is needed to avoid unnecessary costs for Prohibition Zone Property owners and to avoid growth inducement from the project. During Planning Commission review of the project on June 30, John Waddell, Project Engineer, used the figure of 960 AFY for total current flows within the Prohibition Zone. This may be high, given reductions in water use recently. However, with indoor use limited to 50 gallons per capita per day (gpcd) (i.e., Condition 1), the total flows are under 800 AFY, well under the approximately 1150 AFY estimated in EIR and the 960 used by Mr. Waddell.

Additionally, construction of treatment facilities to accommodate build out flows should not occur until the sustainability of the basin is confirmed. In fact, development over the basin should not be assumed or planned until a sustainable water source is confirmed. This is consistent with the LDP and CZLUO (e.g., LCP Public Works Policies 1, 2, 5; and CZLUO Section 23.04.430).

Impacts from sludge disposal: Despite uncertainties about the future of sludge disposal in the County and the potential impacts to the health and safety of the public from hauling sludge and/or recycling it (e.g., air quality impacts), the Planning Commission did not condition the project on having pond treatment. Pond treatment is needed to greatly reduce sludge production and to ensure protection of coastal zone resources (e.g., air quality and crop land, if land disposal becomes the only viable option). The closest facility for sludge disposal outside of the County is Santa Maria (about 100 miles round trip) and the next closest facility (per County Staff during Planning Commission review) is Kern County several hundred miles away. The current project proposal is to use Biolac treatment, which requires weekly sludge removal and hauling. Pond systems require sludge removal every 20 years or so, and STEP systems reduce sludge and bio solids by about 75-90%.

(In addition to the LCP/CZLUO policies/sections cited in the above section, the project fails to conform to /comply with LCP Public Works Policies 1, 2, 5, 6 and 8-10; LCP Groundwater Watersheds Policy 11; CZLUO Sections 23.04.430, 23.04.432, and 23.08.288

Fails to avoid and/or adequately mitigate for impacts to environmentally sensitive habitats

Impacts from Reduced Groundwater Flows: The Coastal Develop Permit finds that there are no impacts to environmentally sensitive ecosystems—or that impacts have been reduced to insignificance with the mitigations provided in the Development Plan and Plan Conditions. However, mitigations are inadequate to protect and maintain coastal wetlands, riparian habitat, and other environmentally sensitive habitats in the area. Spencer Harris, consultant for the LOWWP EIR, stated at the Planning Commission meeting on June 30, 2009, that hundreds of acre feet of flows to Willow Creek Drainage (a riparian habitat) would dry up when the project is implemented and that the area would revert to conditions closer to predevelopment. This was reiterated by Commissioner Christianson on August 13, 2009, and Rob Miller (a consultant for the LOWWP, Los Osos water purveyors, and the LOCSD) at a LOCSD meeting on July 30. .

Willow Creek Drainage supports Willow Creek, Eto Lake, Los Osos Valley Creek, Los Osos Valley Creek Estuary, and Morro Bay Estuary. Other sensitive ecosystems potentially impacted include Third Street Marsh, Baywood Marsh, and Third Street Point Spring. Broderson leach fields are not likely to supply subsurface flows to these systems. Furthermore, Permit Conditions 56-70, 86, 87, 88, and 101 designed to mitigate for biological impacts and address the reduction in groundwater flows fail to conform to mitigation/protection standards as provided in the following policies and sections

LCP Environmentally Sensitive Habitat Policy #2 “As a condition of permit approval, the applicant is required to demonstrate that there will be no significant impact on sensitive habitats and that proposed development or activities will be consistent with the biological continuance of the habitat.

LCP Environmentally Sensitive Habitat Policy #7: “Coastal wetlands are recognized as environmentally sensitive habitat areas. The natural ecological functioning and productivity of wetlands and estuaries shall be protected, preserved and where feasible, restored.”

CZLUO Section 23.07.174 “Streams and riparian vegetation”

The provisions of this section apply to development proposed within or adjacent to (within one hundred feet of the boundary of) an environmentally sensitive habitat as defined by Chapter 23.11 of this title, and as mapped by the land use element combining designation maps.

(1) Application Content. A land use permit application for a project on a site located within or adjacent to an environmentally sensitive habitat shall also include a report by a biologist approved by the environmental coordinator that:

(A) Evaluates the impact the development may have on the habitat, and whether the development will be consistent with the biological continuance of the habitat. The report shall identify the maximum feasible mitigation measures to protect the resource and a program for monitoring and evaluating the effectiveness of the mitigation measures;

(B) Recommends conditions of approval for the restoration of damaged habitats, where feasible...

The applicant has not demonstrated that there will be no significant impact on sensitive habitats or that activities will be consistent with the biological continuance of these habitats. Sites have not been evaluated nor have maximum mitigation measures been determined. To determine the potential impacts on these systems and the effectiveness of mitigations requires measuring and analyzing how

much groundwater is flowing to the systems and the most effective options for replacing these flows. Condition 87 provides for a "Groundwater Level Monitoring and Management Plan," but the plan will be implemented after project installation. Avoiding harm to ecosystems requires putting effective measures in place prior to impacts. Groundwater movement is slow, and avoiding impacts to these vital systems requires proactively replacing flows. The LOGS recommends an integrated system of strategically located community and on-site LID systems, which can be implemented with a water-use efficiency program. We also suggest consideration of a decentralized system leaving many septic systems in place with upgrades.

Impacts from the collection system: The collection system selected for the project does not provide the "maximum feasible mitigation measures" for protecting environmentally sensitive habitats, including Morro Bay Estuary, a protected State Marine Reserve. Thus, this component of the project does not conform not to CZLUO 23.08.288 and other sections cited below.

The *Fine Screening Report* and EIR assume the "hybrid gravity" collection system selected for the project will allow about 100 AFY of water into the system per year more than the system it was compared to (STEP). This is due to leaks in the system which become worse over time. The leaks allow what is known as inflow and infiltration or I/I. The Planning Commission added Condition 98 (sealing portions of the system in high ground water and near the bay) recognizing the need to reduce I/I into the system, which results in increased wastewater flows, increased treatment needs, incomplete treatment, contamination of effluent with seawater (preventing its beneficial reuse), and reduced ground water recharge. I/I, especially during storms, is a leading cause of overflows and pollution of aquatic ecosystems. Exfiltration, or leaks out of a non-sealed system, is also a major cause of pollution of beaches and other marine environments.

STEP will completely eliminate I/I and related problems when laterals are sealed (as called for in Condition 98) and it avoids the need to locate pump stations near sensitive ecosystems as required with the hybrid gravity system (e.g., at Third Street and Pismo Streets). STEP pipelines are installed entirely in shallow, narrow trenches or by horizontal drilling, rather than deep open trenching as needed for gravity line installation. This significantly reduces impacts to soils, existing infrastructure, areas of archeological significance, and water resources. (Deep trenching in roadways requires more water for dust control and soil compaction, and it causes greater impacts to water resources from dewatering, e.g., removal and disposal of groundwater.). STEP reduces or alleviates the need for many conditions on the project designed to mitigate for the gravity system (e.g., 10, 24, 25, 46, 76, and 98). STEP also reduces sludge handling and hauling by 75-90% reducing associated problems (see below).

Furthermore, John Waddell, Project Engineer, indicated (at a Planning Commission meeting on July 24) that the hybrid gravity system is designed for 70-80 gpcd flows, and requires redesign of the system to accommodate conservation flows. On August 13, Mr. Waddell said redesign could be performed as part of a request for proposal (RFP) process. However, design review and analysis of potential impacts for a redesigned system is required to ensure the system protects resources. Impacts from a poorly designed system could include 1) installation impacts due to very deeper trenching, 2) greater blockage and overflows due to inadequate slope or pipe diameters, 3) large amounts of water needed to flush and clean the system, and/or 4) persistent odors. These potential impacts are inconsistent with LCP provisions and violate the CZLUO (e.g., Section 23.08.288). The collection system must perform optimally (e.g., with conservation flows) to protect and maintain sensitive ecosystems and other valuable resources. The STEP system maintains optimal performance with low flows from conservation, so it protects and preserves scarce water resources and provides

maximum protection for environmentally sensitive habitat and other coastal resources consistent with LCP policies and CZLUO requirements.

(In addition to the LCP/CZLUO policies/sections cited in the above section of this appeal, the project fails to conform/comply with LCP Environmentally Sensitive Habitats Policies 1-8, 11, 12, 16, 17-23, 26-30, 36-39; LCP Coastal Watersheds Policies 1-3, 5, 10, 11; LCP Public Works Policies 1, 2, 5, 6 and 8-10; CZLUO Sections 23.01.010, 23.04.403, 23.07.172, 23.07.174, 23.07.176, 23.07.178, 23.08.288).

Fails to avoid and/or adequately mitigate for impacts to scenic and visual qualities

As discussed above, the visual character of the Los Osos will change with the project due to reduced groundwater flows supporting environmentally sensitive habitat and area vegetation. Conditions closer to predevelopment post-project will mean fewer trees and less vegetation in general. The project must protect and maintain the scenic qualities of the community to conform and/or comply with the LCP (e.g., "Visual and Scenic Resource Policies" 1, 2, 6, and 7).

The LCP identifies South Bay (Los Osos, Baywood Park and Cuesta-by-the-Sea) as a small-scale community with special scenic values (*Coastal Plan Policies*, 1988, rev. 1995, p. 10-6-10-7). It states, "The purpose of the special communities, small-scale neighborhood designations is to identify areas with unique, visually pleasing characteristics and to set standards and guidelines for new development that will not detract from these features." *Coastal Plan Policies* also note that South Bay has "... a few visually unattractive elements (that) have detracted from high scenic quality" identifying "...the lack of natural vegetation or landscaping for single-family homes, as well as street landscaping."

As reduced groundwater flows impact natural vegetation and landscaping, property owners will very likely increase watering to maintain and restore it. This will increase project impacts on scarce water supplies and negate the Planning Commission's efforts to mitigate for SWI impacts with conservation and reuse (e.g., Conditions 1, 100, and 103). This potential impact has not been evaluated or mitigated. The outdoor conservation component of the integrated water use efficiency program we recommend (including xeriscape, rainwater harvesting, and graywater reuse) would address this issue (see "Project Conditions Needed").

The unique scenic qualities of South Bay rely also on the continuance of environmentally sensitive ecosystems. Thus, the area has a combined designation under the Coastal Act, providing for a more intense level of project review.

(In addition to the LCP/CZLUO policies/sections cited in the above section of this appeal, the project fails to conform to/comply with LCP Environmentally Sensitive Habitats Policies 1-8, 11, 12, 16, 17-23, 26-30, 36-39; LCP Coastal Watersheds Policies 1-3, 5, 10, 11; LCP Public Works Policies 1, 2, 5, 6 and 8-10; CZLUO Sections 23.01.010, 23.04.403, 23.07.172, 23.07.174, 23.07.176, 23.07.178, 23.08.288).

Fails to avoid and/or adequately mitigate for impacts on social and economic coastal resources

Impacts due to project costs

The LCP states:

“Special coastal communities and neighborhoods are an integral part of the experience of the coast, and are often built on the most scenically-desirable areas. Coastal neighborhoods with distinctive qualities are a value to both local residents as well as visitors. Maintaining their present qualities will often require retaining the present scale and mix of development: (p. 10-7).

As discussed above, the LCP identifies South Bay (the location of the project) as a small-scale community with special scenic and visual qualities. The above paragraph from the LCP—in keeping with the Coastal Act and its emphasis on maintaining viable coastal communities—recognizes the importance of sustaining the community of Los Osos with its distinctive neighborhoods and present mix of development. A main purpose of the CZLUO is “To protect and enhance the significant natural, historic, archeological and scenic resources within the county as identified by the county general plan” [“Title and purpose” Section 23.01.010 (4)]

The most obvious area in which the County Project Team and Board of Supervisors have failed to pursue project affordability in order to protect the social and economic resources of Los Osos is with the decision to eliminate the STEP option from the design-build process. The STEP alternative not only avoids many of the environmental impacts mentioned above, but it substantially reduces project costs. The low, average, and upper cost estimates for a STEP alternative in the fine screening analysis were all substantially lower than for the gravity system, despite a 30% contingency added to STEP and a 10% contingency added to gravity. In retrospect the 10% contingency for gravity was not justified since the gravity system requires redesign to accommodate conservation flows and sealing the system.

When the Lyles Group presented the STEP proposal to the County, it guaranteed a bid for the collection system 20% lower than competing bids. The group made the commitment prior to the Planning Commission’s decision to set a condition on the gravity system to seal much of the system, which adds considerable cost to the system. Including the Lyles team in the design build process would also help ensure a cap on costs, and it would allow decision makers to know true costs and actual system designs to make the best decisions for the environment and community. Excluding the STEP option from the process will add millions to the cost of the LOWWP, further draining the limited resources of a small-scale, low to middle income community. The decision is inconsistent with the LCP because it jeopardizes the viability of a coastal community and it undermines orderly coastal development by draining resources for other public works projects.

Depending upon the outcome of a SWI assessment, a decentralized and/or phased project may be needed to ensure orderly development and make the best use of scarce public funding. The decentralized alternative we recommend would be about one-third the cost. (see “Project Conditions Needed”). (In addition to the LCP/CZLUO policies/sections cited in the above section of this appeal, the project fails to conform/comply with LCP Environmentally Sensitive Habitats Policies 1-8, 11, 12, 16, 7-23, 26-30, 36-39; LCP Coastal Watersheds Policies 1-3, 5, 10, 11; LCP Public Works Policy; CZLUO Sections 23.01.010, 23.04.403, 23.07.172, 23.07.174, 23.07.176, 23.07.178, 23.08.288).

Project Conditions Needed (All of the following are needed for conformance/compliance with the LPC and CZLUO):

1. Further environmental review, testing, and peer-reviewed analysis of the following:
 - the status of seawater intrusion SWI using current data, to determine the potential for a sustainable basin, safe yields with adequate margins of safety, and water supply/ basin management options
 - the status of the upper aquifer using current data
 - flows to environmentally sensitive ecosystems (and water quality)
 - the amount of water pumped from the basin using on-site inspections and monitoring of actual use (including private wells)

2. Based on the above, an analysis of the best use of limited public funding to establish a sustainable water supply for Los Osos. This includes an analysis of how limited funds can achieve maximum water quality/supply benefits, whether the LOWWP (the centralized project proposed) can achieve intended water quality objectives, and options. If the sustainability of the water basin is unlikely, desalination or imported water is needed, and/or the benefits of the upper aquifer can be achieved without an LOWWP project (as suggested by recent purveyor studies); then the LOWWP should be designed, sized, or phased to make the best use of limited public funds necessary to secure a sustainable water supply, while protecting, preserving, and restoring, where feasible, the natural environment, the community, and the economy of the area. This will require at least a 5-year capital improvements plan and longer-term planning with an eye to how coastal zone objectives (protection and enhancement of area resources) can best be achieved.

3. A basin-wide management program to aggressively reduce SWI, implemented by the County, in cooperation with other key agencies (e.g., the Coastal Commission and Regional Water Board). This would be implemented with one year of project approval, aimed at stopping at least 900 AFY of pumping from the lower aquifer within two years. On-going basin assessments and monitoring programs would be implemented to establish safe pumping levels (with ample margins of safety), along with an intensive water-use efficiency program, integrating indoor-outdoor conservation (including graywater and rainwater reuse) with LID recharge and other reuse programs (ag exchange and urban reuse). A well-designed, intensive conservation program (with the elements described) should achieve about two-thirds of 900 AFY reduction, more cost effectively than other options. Shifting pumping to the upper aquifer would achieve the remainder within two years, while minimizing impacts and maximizing benefits to the basin. The County, in cooperation with the Regional Water Board, would implement and enforce the program with a basin-wide ordinance and applicable laws.

4. Conservation and reuse programs for the project, designed to be an integral part of the basin-wide program with the following
 - an integrated indoor-outdoor program maximizing water-use efficiency, including a full ranges of high-efficiency retrofits xeriscape, rainwater harvesting, and graywater options), along LID recharge, leak detection, and water auditor services. (The LID program would be designed, in part, to support the areas environmentally sensitive habitat.)
 - provisions to pursue grant funding and ample funding set aside to implement the program, as necessary (e.g., about \$10 million without grants)

- indoor-outdoor water use targets of no more than 60 gallons per capita per day (gpcd) of potable water use, with the goal of zero use of potable water for outdoor purposes
- an ordinance or ordinances to enact the program and provide incentives

5. A reuse program which specifies recycled water will be used to support only current development within the Urban Services Line, except as otherwise required by law (per LCP policies, e.g., Public Works Policies 1 & 9). The program should also specifically call for an exchange and urban reuse options to be maximized. (These provisions amend/add to Conditions 97 and 103.) They are needed to ensure beneficial reuse will not induce unsustainable growth between the Urban Services and Urban Reserve lines. The parenthetical phrase in Condition 103 should also be eliminated:“(as identified in the “Effluent Re-use and Disposal Tech Memo, July 2008).” The phrase might be construed to limit onsite urban reuse.)

6. Pond treatment, either an Advanced Integrated Pond System (AIPS) or an Air Diffusion (Nelson Pond) System (ADS). The AIPS requires 14 and 12 acres for gravity collection and STEP respectively, and the ADS requires 25 and 21 acres respectively, according to the LOWWP TM entitled “Partially Mixed Facultative Pond Options” (Carollo Engineers, March 2007). (Note: The *Fine Screening Report*, and septage and biosolids TMs, overestimate the treatment needs, sludge and bio-solids production of a STEP system. The size of a pond required for a STEP system treatment, sludge disposal needs (trips to land fills, etc.), and GHC impacts are likely to be significantly smaller or less than the report/TMs estimate.)

7. Thorough design and environmental review of the “hybrid-gravity” system, once it is redesigned for conservation flows.

8. The inclusion of the STEP option in the design build process. The design build process must also allow innovative and cost-saving designs, e.g., plans that integrate all elements of the project (collection, treatment, and water management), also . It should also require bids for fully maintaining the systems in compliance with Water Board requirements for 10 years or more. These provisions are needed to keep costs as low as possible and to identify long-term best value.

9. Appropriate sizing of the treatment system with conservation of at least 20%. This would mean the treatment facility is designed for current flows of about 800 AFY of flows. Treatment for future development would be phased in (if basin sustainability is established) (per LCP policies, e.g., Public Works Policies 1 & 9).

(Note: The above conditions would be new condition to strengthen conditions set by the Planning Commission, or they can be additional conditions. Please also see the attached LOGS letters to the Planning Commission for further details, e.g., for a brief description of the LOGS’s recommended decentralized option.)

August 10, 2009

San Luis Obispo County Planning Commission
County Government Center,
San Luis Obispo, California

Subject: LOSG request for further conditions on LOWWP EIR Certification/Development Permit approval—and request for a supplemental and/or subsequent EIR

Dear Commissioners:

The LOSG sincerely appreciates the many improvements to the proposed LOWWP you will be including as conditions of the LOWWP. They will move the project much closer to an environmentally responsible project. We are especially thankful for your recognition that the LOWWP must do all it can to mitigate for SWI to avoid destabilizing the basin further. SWI is moving rapidly through the basin destroying an irreplaceable coastal resource. As a result, the future viability of a wastewater project is uncertain. The project will cause major disruptions in the basin's equilibrium established over 30 years by removing septic return flows. To help ensure it does not do more harm than good (e.g., make SWI worse and harm sensitive ecosystems), the project must have a very strong water management element—and your Commission will be requiring a much stronger one. This improvement is consistent with integrated watershed management recognized by all authorities as essential for sustainable resources. It is especially important to the sustainability of the Los Osos Valley Water Basin, a relatively small coastal basin, under the multiple pressures of rapid SWI, a serious drought, rising sea levels, and the major hydrological impacts of a centralized wastewater project.

We also applaud your decision to move the treatment site to Giacomazzi (closer to town off prime farmland) and to minimize sludge production from the project. As staff pointed out, the local landfill will not accept sludge and the future of sludge disposal is uncertain. Therefore, the sustainability of the project—in fact, its viability from start up—requires minimizing sludge production.

We continue to have three major concerns and believe further conditions are needed for the project to have a chance of doing more good than harm.

1. **First, we believe EIR Certification and Development Permit approval should be conditioned on STEP going forward as part of the design build process.** We continue to believe it is environmentally superior to the hybrid-gravity system proposed. Even with the gravity system upgrades your Commission proposes (sealing it is high groundwater and along the bay), the STEP system will have fewer problems related to I/I (e.g. serious overflows, exfiltration, contamination from seawater, and reduced groundwater recharge). Also, STEP installation causes significantly fewer impacts because it can be installed via lateral boring at much shallower depths with less disruption to infrastructure and much less dewatering and shoring. STEP also produces 70% less sludge. In fact, the gravity system (even as upgraded) might undo some of the benefits your conditions achieve. John Waddell, County Project Engineer, stated on July 24 that the design of the gravity system would need to be “revisited” to determine if it can operate properly with conservation flows. A redesigned gravity system (e.g., to achieve needed flow speeds and scouring) could mean major new environmental impacts and costs (deeper trenching, more dewatering, more pumps stations, etc.) and/or it could

mean the system requires considerably more maintenance (flushing and cleaning) placing greater demands on limited water. This could offset the benefits of conservation regardless of whether recycled water is used. Recycled water can be used to offset pumping of the lower aquifer and stop SWI, so it provides similar SWI benefits to conservation. If the gravity system is not properly redesigned, it is guaranteed to overflow more often and cause more environmental damage than a STEP system. Further, the design of the proposed gravity system design has to be revisited with or without your Commission's conservation conditions (20% reduction upon project approval). On July 24, an LOCSD representative stated that current indoor use was about 63 gallons per capita per day and 60 gpcd is likely to be closer to the true use. This means the proposed gravity system design is inadequate at current use rates. Conservation is essential to effectively mitigate for SWI. It will occur naturally over time as people replace appliances. More relaxed graywater laws will also lead to reduced flows. Thus, the gravity system as designed is not safe or adequate. **It must be redesigned, and the only possible way (short of a supplemental or subsequent ERI) for a fair comparison of STEP and redesigned gravity system is to move STEP forward to the design build process. This provides decision makers some basis on which to make informed decisions about the relative environmental adequacy and benefits of the two systems and their cost effectiveness.**

(Note: The currently-planned LOWWP—without STEP in the design build process—could seriously harm a community in the midst of a severe economic recession. In a worse-case scenario, cost overruns for redesigning a gravity system (e.g., deeper trenching or greater dewatering) might prevent the project from being completed. A poorly-designed gravity system may also be cost-prohibitive to operate. For example, the maintenance needed to avoid blockages and harmful overflows may exceed the community's ability to cover these costs. Including the STEP option in the design build process helps ensure maximum competition and a cap on project costs (no change orders). We believe the LOWWP with gravity collection will cost residents at least 30% more than a system with STEP collection (i.e., \$40 to 50 million). This is supported by the statements of Dana Ripley on July 24. (Mr. Ripley is an expert on STEP systems and consultant to one of the design-build teams.) A 30% unnecessary premium on costs equals \$40 to 50 per month for each homeowner in the Prohibition Zone, in most cases, for the remainder of his or her life.

2. **Second, we strongly recommend you set a condition that the project has pond treatment.** Although your Commission indicated it intends to reduce sludge, you have apparently not set a condition that treatment is with a pond system. Pond treatment will reduce sludge by several orders of magnitude compared to a Biolac system, the recommended treatment alternative. Biolac or Oxidation Ditch treatment systems apparently require weekly removal, hauling, and disposal of sludge. We heard on July 24 that the local landfill is not accepting sludge, and your Commission voted against land application. *Therefore, sludge must be minimized to the extent possible for the project to be viable. This is consistent with the Coastal Commission's input to the County in a letter dated July 15.* It may well be that Biolac and Oxidation Ditches are infeasible under current conditions. The finding in the EIR that Biolac is environmentally superior to ponds is simply not accurate, especially with the need for frequent trips to distant landfills and the future uncertainties of disposal. Furthermore, with the newly calculated reduced flows for the LOWWP, a treatment pond will easily fit on the Giacomazzi site. On July 24, Mark Hutchinson said a storage pond is not needed with the reuse options

your Commission is recommending. Finally, pond treatment plus a storage pond may fit on Giacomazzi if a STEP system is chosen since the STEP system reduces sludge by 70%.

3. **Third, we strongly recommend that low impact development (LID) on-site and community systems are added as a condition to help mitigated for impacts to ecosystems. We recommend they are added to the conservation program per our integrated sustainable basin plan—and we recommend more funding is allocated for an integrated program (e.g., for administration, outdoor strategies, and LID).** We remain very concerned that the impacts to ecosystems in the area have not been adequately mitigated. The EIR claimed no impacts will occur when septic flows are removed with the project, despite acknowledging they provide a substantial portion of the subsurface flows to ecosystems in the area (e.g., marshes and creeks) We appreciate your efforts to mitigate for Willow Creek Drainage but remain doubtful 33 AFY of recycled water discharged at Bayridge Estates will mitigate for about 430 AFY of reduced flows. Willow Creek Drainage supplies Willow Creek, Eto Lake, and Los Osos Valley Creek. Furthermore, no mitigation has been provided for marshes and springs along the bay; even though Spencer Harris, author of one of the EIR hydrologic reports, acknowledged potential impacts at your June 30 meeting—and they were identified and mitigated with the previous project. Broderon leach field disposal, as suggested in the EIR, will not reasonably mitigate the impacts to systems some distance from the site (e.g., Third Street Marsh, Baywood Marsh, Eto Lake, and Los Osos Valley Creek). When upper zone water tables drop significantly with the project, these ecosystems will undoubtedly experience negative impacts, possibly severe ones. Note that it may not be possible to fully mitigate for impacts if the project uses centralized collection (i.e., stops all septic flows within the Prohibition Zone). The LOSG proposes a decentralized option as the most sustainable system overall—see below. We believe the failure to identify and mitigate for negative impacts to ecosystems is another obvious flaw in the EIR and reason for a supplemental or subsequent EIR.

4. **Fourth, we continue to believe a basin-wide plan and ordinance must be a condition of the project.** The plan and ordinance should have the stated purpose of stopping SWI as soon as possible, emphasizing conservation, ag exchange, and urban reuse. Each of these has SWI mitigation factors of .55, with all other options less than half as effective. Thus, they offer the most certain ways to stop SWI by directly offsetting pumping of the lower aquifer and relying minimally on basin modeling. They also provide co-benefits (reduced energy and nitrate fertilizer use). The goal would be to stop at least 900 AFY of pumping from lower aquifer wells causing SWI. A comprehensive, basin-wide plan is needed because property owners served by the LOWWP use only about one-half of the water in the basin (about 1500 AFY of 3200 AFY). The ISJ/water purveyor basin planning process applies to only about two-thirds of the water pumped (2100 AFY of the 3200 AFY). A basin wide plan provides the best chance of stopping SWI, so it is necessary for minimal assurance of project viability (i.e., a sustainable water supply). As the Coastal Commission pointed out, safe mitigation for SWI cannot rely on the purveyor adjudication process with uncertain outcomes and timelines. Recently (July 30, 2009) a consultant for the purveyors presented a preview of the plan emerging from the ISJ process. It calls for shifting about 900 AFY of pumping from the lower aquifer to the upper aquifer. According to the February 2007 Los Osos Vater Supply *Resource Capacity Study*, which set the Level III of Severity for the basin, this much pumping of the upper aquifer exceeds the established safe yield by 40% (about 1600 AFY vs. 1150

AFY) (p. 9). The EIR states the upper aquifer is only “relatively” stable subject to SWI during extended droughts (Appendix D-2, p. 17). Thus, the ISJ plan would over pump the upper aquifer to stop over pumping the lower aquifer, negatively impacting the upper aquifer during a period when it experiences major impacts from a wastewater project. Cooperative arrangements among purveyors since 1994 have failed to implement effective conservation measures and resulted in SWI getting worse. Clearly, the purveyor ISJ process cannot be relied on to provide the level of conservation needed, safely mitigate for SWI, or protect and enhance vital resources.

Need for a supplemental or subsequent EIR

A supplemental or subsequent EIR is necessary to address the many documented deficiencies and omissions in the current EIR, and to consider new information. Some of the areas needing a fair and thorough review are the following:

- 1) the potential impacts of accelerating SWI (e.g., further analysis based on current well test data),**
- 2) the potential impacts from reduced flows to ecosystems (e.g., testing and calculations of flows with safe mitigation)**
- 3) the potential impacts of a redesigned gravity system (e.g., sealing, depths of trenches, dewatering, and pump stations)**
- 4) the potential impacts of collection systems (e.g., I/I, clogging, reduced aquifer recharge, overflows, maintenance)**
- 5) the potential impacts of sludge production and disposal (e.g., impacts/uncertainties of future disposal options)**
- 6) the potential impacts of graywater use and reduced flows (e.g., impacts on collection system operation and maintenance)**
- 7) the potential impacts of STEP (e.g., benefits of high-nitrate effluent and reduced sludge).**

Further, we continue to request a supplemental/subsequent EIR to address the failures of the first EIR to provide adequate and accurate project scoping, purpose and needs, and objectives. The LOSG formally submitted scoping recommendations for sustainable project options to the Board of Supervisors in June of 2007 that were not addressed in the DEIR. SWI is a more serious threat to water quality in the Los Osos Valley Water Basin than nitrates and this should have been reflected. It is clear from the EIR and basin studies that nitrates in the upper aquifer have stabilized, but SWI is rapidly contaminating the basin.

We also again call for a fair and thorough analysis of a decentralized option with collection from up to 1000 homes near the bay and in high groundwater areas—with wetland or greenhouse treatment at an in-town location. This option, presented to the SLO Board of Supervisors in January of 2009 and to your Commission on July 23 of 2009, we believe is the most sustainable. It would keep most septic systems in place with upgrades. It would include a centrally-managed nitrate management program, septic system management program, and the sustainable water management plan recommended by LOSG. We believe the option achieves all project environmental objectives more effectively at about one-third the cost. It also provides the greatest possible benefits to all systems—environmental, social and economic. It eliminates septic system discharges posing the greatest threat to ground and surface waters, partly by lowering groundwater levels in areas where water is prone to surfacing. It minimizes disruption to basin hydrologic systems—recharge cycles and freshwater flows to ecosystems (e.g., Willow Creek). It speeds up water quality improvements by maximizing LID recharge (dilution of

nitrate in the upper aquifer) and slowing the rate of septic system discharge (via conservation). It alleviates all impacts to farmland and the Broderson site. It reduces disturbance of ESHA by 60% or more, and reduces GHG's by about that much. Finally, it provides enough recycled for water ag exchange and urban reuse within the basin to help stop SWI. Note that it would not comply with the Regional Water Board's current zero discharge prohibition and would require modifications to the order in the project's permit (Waste Discharge Requirement—WDR).

Summary

Again we thank you for addressing many of the proposed project's serious flaws. **If you approve the EIR and Development Permit with the conditions you've approved in "straw votes," we believe the additional conditions discussed above (and summarized below) are necessary for the project to have a chance of doing more good than harm.**

- 1. STEP in the design build process to reduce sludge, collection system groundwater impacts, and lower system cost—also to allow decision makers to know the true benefits and costs of competing systems necessary for good decision making.**
- 2. A basin wide plan and ordinance to stop SWI as soon as possible, maximizing conservation.**
- 3. A pond treatment system to reduce sludge production to the extent feasible.**
- 4. LID options (e.g., for ecosystem support) added to the indoor/outdoor conservation measures as part of an integrated program, with additional funding earmarked (possibly offset by grants). (This assumes all indoor and outdoor options provided in the LOSG plan are already included in the condition approved by straw vote. Essentially, we are recommending the integrated LOSG water-use efficiency plan with adequate funding to achieve its potential benefits.)**

Also, we continue to believe supplemental and/or subsequent EIR(s) are essential to provide adequate and appropriate scoping, purpose and needs, and objectives for the project—as well as to review the options and potential impacts we identify above.

Sincerely,
Los Osos Sustainability Group