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

Mr. Hutchinson

The following comments and facts are provided for the purpose of proving that the 1.2 million gallon average daily wastewater generation estimated for the LOWWP is overstated by a minimum of 200,000 gallons.

Page 3-19&20 states that the Flow and Loads Tech Memo and the Rough Screening Analysis show "2006 water consumption rates for the approximately 8500 residents served by the LOCSD during winter months were about 66 gallons per capita per day and since there is little outside irrigation during the winter months, 66 gallons per capita per day is a reasonable current estimate of Los Osos per capita wastewater generation rates. With the estimated build out population of 18,500, this yields a baseline dry-weather generation rate of 1.2 million gallons per day."

1. The assumption that there is little outside water use during the four winter months used in the analysis, assumes that all four months (Jan – April) are wet weather months. There are no facts in the document backing up this statement and I believe if you look into the history of precipitation in Los Osos over the years you will find that precipitation is not consistent throughout those four months from year to year, but sporadic at best. Have you inquired of both schools in the LOCSD water district as to whether or not they shut off their outside irrigation completely during these four months? They are two of the top consumers of water for outside irrigation in the district. Any outdoor irrigation, even 10% of total household consumption, during the four month period analyzed, skews your average dry weather per

capita per day wastewater flow rate of 66 by a proportional percentage downward.

2. Why are you using 2006 water consumption rates of 66 gallons per capita per day? There have been two water rate increases fully implemented in the LOCSD water district which has resulted in an annual reduction in consumption for the LOCSD water district customers from 288,910,600 gallons in 2006 to 264,026,600 in 2008. This reduction drops the indoor per capita per day rate to 60. A 6 gallon per capita per day wastewater flow reduction, times your estimated build out population for the prohibition zone of 18,500, results in a reduction of 111,000 gallons of flow to the treatment facility.

3. Why does this document and all documents leading up to this DEIR state the estimated build out population of the prohibition zone as either 18,428 or 18,500? As you know, estimated build out for the entire community of Los Osos is projected to be 19,713 as stated in various documents leading up to this DEIR. If build out for the entire community is 19,713, than 18,428 can not be the build out population for the prohibition zone. Fact: Reports prepared for the LOCSD by Wallace Group, and out of District Engineer Rob Miller's own mouth at a TAC meeting, state that the breakdown of population inside and outside the prohibition zone is currently 87% inside, 13% outside. An 87% -13% split of the current population for Los Osos (14,351 - 2000 census) is 12,485 inside /1,866 outside. If you assume that there will never be another home built outside the prohibition zone, then 17,847, (19,713 – 1,866), is the maximum future build out population for the prohibition zone. Multiplying 17,847 times updated 60 gallon per capita per day wastewater flow equals a 1,070,820 gallon average daily flow. This number represents a reduction of 150,180 gallon per day from your build out wastewater flow estimate of 1,221,000 (18,500 X 66). Now, if the current 87%-13% inside/outside population split remains consistent with respect to future development, then 87% of full community build out of 19,713 results

in an inside the prohibition zone population of 17,150. Multiplying 17,150 times updated 60 gallon per capita per day wastewater flow equals a 1,029,000 gallon average daily wastewater flow to the treatment facility. This number represents a reduction of 192,000 gallon per day from your build out wastewater flow estimate of 1,221,000 (18,500 X 66). Either reduction is significant, and coupled with other points of contention in these comments, proves my belief that you have overestimated the build out wastewater flow to the treatment facility.

4. Section 2.4.5 (attached) and elsewhere in the document states that water conservation measures would be implemented to reduce water consumption and the corresponding wastewater generation by 0.1 million gallons a day or 160 acre-feet a year. I would like to know which is it? Which is the goal? 0.1 million gallons a day or 160 acre-feet a year? They are certainly not the same. 0.1 million gallons a day is approximately 112 acre-feet a year, not 160 acre-feet a year. 160 acre-feet a year is approximately 0.143 million gallons a day, a 43,000 gallon per day reduction in required treatment plant capacity.

In conclusion I would like to emphasize that this is not the first time I have voiced my concerns about the numbers discussed in the above comments. I have spoken numerous times at Board of Supervisor, TAC, and LOCSD meetings over the past two years about these very points, to no avail. However, I have no intention of dropping the subject in the future if the aforementioned inaccuracies are not addressed and corrected. I tried to explain my concerns as simply as possible, but believe me when I tell you that I can prove the same conclusions by approaching the underlying premises thru the front door, back door, or side door. My main concern about over sizing the project for flows, beside some degree of cost savings, is that the opportunity arises for excess capacity available for build out beyond the current build out population projections, and all the cumulative impacts related to that build out. If you have any questions or would like more information, please contact me.

Sincerely,

Richard Margetson
Box 6721
Los Osos, CA 93412

2.4.5 - Conservation Considerations

The average wastewater generation rate of 1.2 million gallons a day estimated for the LOWWP assumes that water conservation measures would be implemented to reduce water consumption and the corresponding wastewater generation rate by 0.1 million gallons a day or 160 acre-feet a year. Reducing wastewater generation by 160 acre-feet a year by 2020 represents about a ten percent reduction from the 2006 average daily per capita wastewater generation rate. If the water conservation measures are not implemented, the capacity of the wastewater treatment facility would have to be increased by 0.1 million gallons per day, and the treated effluent disposal system would have to accommodate additional flows.

All four Proposed Projects may include the proposed water conservation measures, which would include three primary elements:

1. Mandate that property owners retrofit their bathrooms with all low-flow fixtures, including low-flow toilets, prior to hooking up their buildings to the sewer.

2. Conduct Public Education campaign to increase awareness of water conservation practices.

3. Promote High-Efficiency appliance measures that are sponsored by the gas and electric utility companies. Many of these programs cover appliances such as energy efficient dishwashers and clothes washers that would reduce both energy and water consumption.

Leachfield

Effluent disposal through leachfields is a means where treated effluent is spread on a prepared area and allowed to percolate into the ground. This method would not depend on weather conditions so it may be used on a year-round basis. Application rates may be adjusted so annual effluent disposal totals do not exceed the leachfield's design capacity and annual hydraulic loading capacity respectively. This flexibility allows the LOWWP to discharge more effluent through a leachfield during the winter wet season when the spray fields are not available and less effluent during the summer when the spray fields can be used. Approximately 8 acres of the approximately 80-acre Broderson site is suitable for a leachfield. The Broderson site is the only potential leachfield site that incurs a seawater intrusion mitigation benefit. The 8-acre active leachfield area at the Broderson site would require extensive preparation to function properly including excavation, backfill with gravel for drainage, installation of perforated piping, and then covered by geotextile fabric and native materials.

Spray fields

Spray field disposal is the practice of spraying effluent on land to dispose of the water through evapotranspiration and percolation. Spray field disposal, which requires secondary treatment, would be operated to maximize evaporation and avoid runoff. Disposal would occur through evapotranspiration, or through both evapotranspiration and percolation. The LOWWP would need

Table 2-3 and Table 3-5 (copies attached) are inconsistent with each other. I believe there are computation errors in Table 3-5.

Table 2-3 states that 7 acres at Broderson are available for leach fields and Table 3-5 states that 8 acres are available. Which number is correct?

The explanation of the capacity threshold for the Tonini spray fields needs to be clarified in order to insure that 842 AFY actually can be sprayed at the site.

Table 2-3: Proposed LOWWP Effluent Disposal System

Effluent Disposal Method	Available Area (acres)	Estimated Capacity per Acre (AFY[1]/acre)	Capacity (AFY[1])	Proposed Project Capacity (AFY[1])
Broderson Leachfield	7	64	448[2]	448
Tonini Spray fields[3]	190 (175 used)	4.8	910	842[3]
Total Effluent Disposal Capacity			1,358	1,290
Conservation Program			160	160[4]

Notes:
1 AFY = acre-feet per year.
2 This is a conservative estimate of the maximum possible estimated effluent discharge capacity that can be sustained reliably without constructing dewatering wells downstream that could pump out groundwater, if necessary, to maintain adequate depth to the groundwater table and avoid saturated soil conditions along the bay. See Section 5.2 and Appendix D for additional detail on groundwater issues.
3 The Proposed Projects will use 175 acres of the 190 suitable acres at the Tonini site. 842 AFY of proposed spray irrigation at Tonini corresponds to 175 acres of spray fields.
4 The 1,290 AFY needed effluent disposal capacity assumes that a water conservation program will be implemented that will reduce water consumption and corresponding wastewater generation by 160 AFY.
Source: Carollo, April 2008.

2.4.4 - Solids Processing and Disposal

The quantity and frequency of solids management varies significantly for the four Proposed Projects. For partially mixed facultative ponds, accumulated solids are removed from the ponds typically every 15 to 20 years. The removed solids would be processed in temporary mobile solids processing facilities. Algae must be removed more frequently from the facultative pond surfaces (algae is considered a biosolid for regulatory purposes and sufficient aeration will control algae growth). For oxidation ditches/Biolac systems, solids are settled out in the secondary clarifier tanks on an ongoing basis and then pumped to the permanent solids handling facilities.

The removed solids from both types of treatment facilities would be processed in an aerobic digestion process, dewatered by a screw press system to about 15 percent solids, and then hauled to a Class B landfill for disposal. Solar drying or composting could be used to process and dispose of the accumulated algae.

A STEP/STEG collection system handles solids in a different manner. A STEP/STEG system retains solids in the on-lot tanks instead of discharging all material to the collector system. It will be necessary to pump solids from the STEP/STEG tanks on a periodic basis (every five years) and transport the solids to the wastewater treatment facility.

Noise and odor control are important considerations for the solids processing facility, so the solids processing equipment would be enclosed within a sound insulated building. An inorganic media air scrubber would trap and scrub the interior foul air before releasing it to the outside air.

Noise and odor control are important components for the biosolids processing facility, so the biosolids processing equipment would be enclosed within a sound insulated building. An inorganic media air scrubber would trap and scrub the interior foul air before releasing it to the outside air (Crawford, Multari and Clark Associates, 2000; and Appendix B, Project Description Data).

Effluent Disposal

All four proposed projects include disposal of 1,290 acre-feet/year (AFY) of projected treated effluent based on the wastewater generated by the buildout population and estimated wet weather infiltration into the collection system of 336 AFY for three months per year. This treated effluent flow projection assumes that the County implements water conservation measures as described below.

No single effluent disposal alternative has enough capacity to accept the entire 1,290 AFY effluent flow (Carollo Engineers April 2008). Therefore, different effluent disposal options must be combined to create sufficient effluent disposal capacity as summarized in Table 3-5. The choice of effluent disposal options also affects the groundwater water quality and groundwater management benefits created by the project, including reducing seawater intrusion. These issues are discussed below under each treated effluent disposal option. Detailed analysis of the impacts that effluent disposal has on groundwater quality and quantity issues is provided in Section 5.2, Groundwater Resources.

Table 3-5: Proposed LOWWP Effluent Disposal System

Effluent Disposal Method	Available Area (acres)	Estimated Capacity per Acre (AFY[1]/acre)	Capacity (AFY[1])	Proposed Project Capacity (AFY[1])			
				Proposed Project #1	Proposed Project #2	Proposed Project #3	Proposed Project #4
Broderson Leachfield	8	64	448[2]	448	448	448	448
Tonini Sprayfields[3]	80	4.8[4]/3.0[5]	864	842	°42	842	842
Total Effluent Disposal Capacity			**1,358**	**1,290**	**1,290**	**1,290**	**1,290**
Conservation Measures[6]			160	160	160	160	160

Notes:
[1] AFY = acre-feet per year.
[2] This is a conservative estimate of the maximum possible estimated effluent discharge capacity that can be sustained reliably without constructing dewatering wells downstream that could pump out groundwater, if necessary, to maintain adequate depth to the groundwater table and avoid saturated soil conditions along the bay. See Section 5.2 and Appendix D for additional detail on groundwater issues.
[3] The proposed Tonini sprayfields would include a combination of evapotranspiration (ET) and percolation and ET only. The actual split between land that is suitable for ET and percolation and land that is suitable only for ET will be determined as part of the design process. Other site conditions such as providing buffers along coastal streams will be accommodated in the final design.
[4] Capacity for ET and percolation.
[5] Capacity for ET only.
[6] The 1,290 AFY needed effluent disposal capacity assumes that water conservation measures will be implemented to reduce water consumption and the corresponding wastewater generation by 160 AFY.
Source: Carollo Engineers, April 2008b.