Technical Memorandum Name: **Decentralized Treatment, January 2008**
Commenter: **Anne Norment**
Comments Date: **January 9, 2008**
Responses Date: **September, 22, 2008**

The following comments were submitted in response to the above listed Technical Memorandum (TM). The TM was developed as part of the EIR process for the project, in order to help facilitate and broaden the discussion of project issues important to the community. The responses should be considered preliminary because the EIR process is not complete, and the information necessary to fully respond has not yet been developed. The project team is grateful to those citizens who took the time to review the TM and provide comments at this early stage in the process. The project team will endeavor to fully address the comments and concerns through the on-going project development process.

	Comment	Response
1	DT offers an important option for the LOWWP that would allow for significant mitigation of sea water intrusion, potentially serving as a cost effective viable alternative to other proposed projects in the fine screening report. However the TM bases cost projections and community impacts on a DT scenario with 30 mini-treatment plants in town, and subsurface irrigation to each residential lot. Based on discussions between Lawson Schaller and Lombardo and Associates (experts in DT technology) DT may be applied with many fewer treatment plants (4-6) and treated water could be applied to irrigate parks, school yards, Sea Pines golf course, wetlands and other large users, allowing for sea water mitigation and taking pressure off of the Broderson recharge site without high cost of individual lot irrigation**. In this regard the DT TM and EIR should include/address the following:**	The draft Decentralized TM presented the overall concepts and issues associated with decentralized wastewater collection and treatment in Los Osos and addressed the conceptual descriptions submitted by Pio Lombardo in a letter dated June 8, 2007. Due to the uncertainty of the conceptual description, and public comments submitted in response to the draft TM, Pio Lombardo of Lombardo Associates, Inc (LAI) was retained to further develop a conceptual decentralized plan for the development of a Final TM. In the daft TM, approximately 30 sites were estimated to be required if they were to be located on individual vacant lots in the community. The LAI conceptual plan for decentralized treatment includes 7 separate collection zones and treatment plants on sites ranging from one to several acres. Detailed cost estimates for this decentralized plan are presented in the Final Decentralized Treatment Tech Memo and appendices.
2	Cost analysis of DT that is appropriate for Los Osos and based on 4-6 treatment plants, with a focus on sites at larger tracts of land such as Tri-W. This would greatly reduce the construction costs for treatment sites, as well as costs of monitoring effluent. Cost analysis breakdown with treated water to be used for irrigation of larger parcels as described above, and not subsurface drip to individual homes.	See above. Residential reuse of treated effluent was considered because it was a key element of the conceptual descriptions submitted by Pio Lombardo in a letter dated June 8, 2007. The LAI conceptual plan and cost estimates in the Final Decentralized Treatment Tech Memo and appendices includes options for residential reuse and options for sub-surface disposal.
3	Description of the likely nature of in town treatment plants including visual, odor and noise impacts (are they below ground?) as well as energy footprint. If treatment systems require high energy use due to the small footprint required for in town treatment sites, then this would prove a significant disadvantage of DT (lack of	Visual, odor, and noise impacts can and should be mitigated for any in-town treatment facility considered. However, community and neighborhood acceptance can still be a significant challenge, regardless of mitigations.

	compatability with AB32).	
4	Industry experts in DT should be consulted to identify a likely scenario for DT that would best fit needs of the LOWWP.	As primary proponent of a decentralized system for Los Osos, Pio Lombardo of Lombardo Associates, Inc (LAI) was retained to further develop a conceptual decentralized plan for the development of a Final TM. Detailed cost estimates for this decentralized plan are presented in the Final Decentralized Treatment Tech Memo and appendices.
5	Comparison of ESHA impacts of DT plants vs impacts of commercial or residential building at the same lot.	Analysis of potential ESHA impacts is being completed for the draft EIR.
6	Discussion of decreased risks and costs of in town treatment through DT, relative to wastewater conveyance to an out of town site followed by subsequent transport of treated effluent back to Los Osos of basin recharge. Discussion of these risks in light of potential in town sewage spills with DT that could impact safety and marine life in Morro Bay.	Potential impacts to public health and environmental resources are being analyzed in the draft EIR. Detailed cost estimates for this decentralized plan are presented in the Final Decentralized Treatment Tech Memo and appendices.
7	In contrast to what is stated in the TM section 4.1.5, multiple in town discharge sites were previously permitted by the RWQCB for development of the Tri-W site, providing precedent that the RWQCB may permit multiple DT discharge sites. The TM should accurately convey this point.	A Waste Discharge Permit from the Regional Board is expected to be more of a challenge under a decentralized scenario, compared to centralized treatment and disposal, because of the multiple treatment processes to monitor. In addition, many of the proposed discharged sites have not been extensively studied under previous project reports.
8	Multiple discharge sites would take pressure off of recharge at the Broderson site. Given that the proposed application of 400,000 gallons treated effluent per day is proposed at the Broderson site (15x EPA guidelines), DT recharge at other sites potentially offers a safer alternative (see below).	Analysis in the Fine Screening Report and other documents has established that Broderson does not have adequate capacity for the full flow of treated wastewater at buildout (approx. 1.2 mgd) and that additional disposal and reuse options are required. Other sub-surface disposal sites in the lower elevation areas of the community would provide additional disposal capacity, but have marginal benefits for mitigating sea water intrusion.
9	The TM indicates that use of treated wastewater for irrigation in Los Osos would reintroduce nitrates into groundwater basin. This does not account for decreased use of nitrogen containing fertilizers, a point which should be included.	Individual landscape practices cannot be relied on to reduce nitrogen contamination. It is expected that any wastewater system developed for Los Osos which discharges within the Prohibition Zone will be required by the Regional Board to meet the 7 mg/L total nitrogen standard.
10	Direct comparison of expected sea water mitigation by DT and in town application for irrigation vs that expected with an out of town site and agricultural exchange.	The LAI conceptual plan includes two management options for treated effluent. They are estimated to provide sea water intrusion mitigation comparable to Level 2 and Level 3, which are defined in the Effluent Reuse and Disposal Tech Memo.