

**Technical Memorandum Name: Flows and Loads, March 2008**  
**Commenter: TAC – Engineering Committee**  
**Comments Date: March 21, 2008**  
**Responses Date: April 30, 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.

	<b>Comment</b>	<b>Response</b>
1	The peaking factor ( $PF = PDDWF/ADDWF$ ) for gravity collection systems was discussed in detail. The question raised concerned the difference between the 10 State Formula ( $PF=2.7$ ) and the TM value of $PF=1.8$ . Rob Miller responded that current local studies showed that a PF of 1.8 is satisfactory. The difference between the two values may be due to different demographics, a national average versus local data, and historical versus current information. Rob Miller also pointed out that the design of many portions of the gravity collection system are controlled by maintenance issues and hence the resulting pipe sizes are independent of the ADDWF and PF.	<p>The gravity collection system peaking factor estimated in the TM is approximately 2.3. This is the factor of the difference between estimated average dry weather flow (1.1 MGD) and peak wet weather flow (2.5 MGD) and corresponds to the maximum flows that the collection system is expected to convey.</p> <p>The factor of 1.8 is an estimate of the daily variance in residential use, but is only one variable in estimating the overall peaking factor.</p>
2	The engineering committee also discussed the PF for step collection systems ( $PF = 1.4$ ). Rob Miller stated that he felt a $PF=1.4$ may be satisfactory. It is noted that if the design PF is low, then the true value the STEP pumps can offset that by pumping longer. The engineering committee also notes that operation of the STEP pumps outside of their optimum range may lead to excessive wear and tear on the pumps with resulting increased costs in O&M. Accordingly the engineering committee feels that is important to properly size the STEP collection system so that pump operation is optimal.	A STEP collection system has a longer hydraulic residence time than a gravity system due to the several hours of storage in each septic tank. The daily variances in flows will be attenuated to a certain degree because some septic tanks will have available storage capacity during the peak use times.
3	The methodology and results of the flow analysis were discussed. It is pointed out by this committee that the life of the collection system may be in excess of 50 years. It is almost impossible to predict the sewer demands so far into the future. Long term demands on the collection system and sewer plant will depend upon important changes such as demographics, water availability, water conversation, housing development, etc. Accordingly, the design engineer must take a	Comment noted.

	conservative and careful approach when selecting design parameters for the Los Osos waste water system.	
4	There was universal agreement among the attendees that this TM must be subjected to a careful and thorough PEER review. Decisions with respect to design flows, peaking factors, infiltration, exfiltration, etc. are critical in the design of the collection system and sewer plant. Considering the life of this system and its long term economic impact on the Los Osos community there is little room for error. Accordingly care must be taken to be certain that the design assumptions are as accurate as possible and are consistent with standard engineering practice.	Comment noted.
5	Another engineering committee comment concerns the sensitivity study. The sensitivity study presented in the TM did not include the collection system and this committee feels that this omission should be corrected.	Collection system designs are typically based on minimum pipe sizes to accommodate maintenance requirements and have excess hydraulic capacity. It is assumed that the excess capacity is adequate to handle the potential range of variance in system flows.
6	Also, the TM does not include information from the most recent 2007 EPA study when considering exfiltration. This may be important from an environmental point of view and the TAC environmental committee may wish to discuss this matter.	A search of the EPA website did not find any reports on exfiltration from the year 2007. What is the referenced report?
7	Finally the engineering committee notes that the TM did not use information concerning the Golden State Water Company users. This information is available and would be valuable in firming up community water usage.	Water purveyors throughout the County, including Golden State, submit a one page form of general water system production data. While this information is useful for estimating the total demand on the basin, it is not detailed enough to estimate average residential indoor water use.