

**TAC Meeting – February 4, 2008**  
**Announcements from the Chair**

I would like to welcome the members of the community both here in the audience and those at home watching on television to the first TAC meeting held here in Los Osos this year. We would not be here except for the overwhelming support the community gave to the Wastewater Project in the 218 election. As a result, it is now time to move forward to the many details of the Project including design, selection, permitting and finally construction of the wastewater system.

Currently the County is working on the all important Environmental Impact Report, know by it acronym EIR, which is a requirement before any specific project's technology or location is chosen. The purpose being to insure that all reasonable alternatives to the elements of the project and their effects on the environment are studied. The county EIR Team currently estimates that this process should be completed in August of this year.

As a part of that EIR process the Project Team will be producing a series of Technical Memorandums covering a variety of subjects that need to be addressed in the EIR. These are public documents that are available on the county's Los Osos Wastewater Project website.

It will be the responsibility of the TAC to formulate their comments and, equally important, gather public comments on each of those Technical Memos and report them back to the Project and EIR Teams. The TAC reports will then become part of the backup materials for the EIR.

Currently we have been told of about 14 Technical Memos (TMs) that are planned. Since we will now be meeting here on the first Monday of each month we will be required to comment on more than one TM at each meeting - as can be seen by our agenda we have three TMs for this evening. In order to achieve our task in a reasonable amount of time it is important that we insure we stay productive during our meeting. When our agendas are published they will indicate and provide a link to the TMs to be discussed. Either with the agenda, or shortly thereafter, the reports from the three TAC committees will also be published. It is our hope that the interested public will read them in advance and, if possible, send comments to us via email with the TM name in the heading. We will collect all emails pertaining to the TMs up to the day of the meeting and bring them with us. If you are not on our email distribution list please sign-up by either sending us an email at [lowwp@co.slo.ca.us](mailto:lowwp@co.slo.ca.us) or following the link on our website.

During this meeting the following format will be used for each TM;

I will present a very short introduction of the TM

The TAC will discuss among themselves the three committee's comments.

Email comments received pertaining to the TM will be read and entered into the report

Written comments from the audience pertaining to the TM will be read and entered into the report

Oral comments from the public pertaining to the TM will be heard and transcribed into the report.

Duplicate email and written comments will be eliminated from the TAC report. We encourage public members here to submit their comments in writing. For oral presentations we request that you not duplicate any comments that you have already heard and make sure that your comment only pertains to the TM under discussion. If appropriate we will allow discussion between the speaker and the TAC members rather than waiting until the end of the public comment period.

Final TAC reports which include TAC and public comments will be available on our web site.

**LOS OSOS WASTEWATER PROJECT  
TECHNICAL ADVISORY COMMITTEE**

San Luis Obispo County Department of Public Works



**Technical Memorandum – On Site Treatment**

**January 31, 2008**

**Finance Committee:**

**Questions**

1. Will other on-site options be considered, e.g. composting toilets?
2. RE: Problems with bacteria when house is vacant for prolonged periods: how long?

**Comments:**

1. (None)

**Environmental Committee:**

**Questions:**

1. Is it possible to generate a “Table 2”(from TM #1) for onsite systems?

**Comments:**

1. The TM’s discussion of Groundwater balance seems to mix the specific effects of the onsite approach with benefits that can be realized for any project, like pumping shallow aquifer water for non-potable irrigation use. This concern also holds true for the very similar discussion of groundwater balance in the Decentralized TM. The benefits described appear to be substantially the same regardless of the technology.
2. Size of onsite facilities is a limiting factor due to lot size. Some systems cannot be accommodated on individual lots.
3. The EIR should consider the feasibility of permitting any type of onsite treatment and disposal system in the project area

**Engineering Committee:**

**Questions:**

1. DOES RES. 83-13 PRECLUDE ONSITE TREATMENT?
2. WHAT IS THE PERCENTAGE OF VACATION AND SECOND HOMES IN LOS OSOS?

**Comments:**

1. LACK OF FLEXIBILITY- DISPOSAL (LEACHFIELDS OR REUSE FOR LANDSCAPE NEEDS)/ NO FLEXIBILITY TO MOVE WATER TO UPPER OR LOWER AQUIFER DEPENDING ON NEEDS. WATER QUALITY- FUTURE

**CHANGES IN WATER QUALITY REGULATIONS WILL BE CUMBERSOME TO ACHIEVE WHEN RETROFITTING 5000 SYSTEMS**

- 2. REUSE FOR LANDSCAPING WILL RESULT IN A SURPLUS OF TREATED WASTEWATER. REQUIRING ON-SITE STORAGE. IRRIGATION SYSTEMS FOR REUSED WATER ARE EXPENSIVE.**
- 3. NO COLLECTION SYSTEM NEEDED**
- 4. REPLACEMENT ADVANCED TREATMENT SYSTEMS ARE EXPENSIVE**
- 5. WATER QUALITY TESTING IS EXPENSIVE IN A MULTIPLE POINT SOURCE SYSTEM**
- 6. VACATION UNITS ARE PROBLEMATIC DUE TO LACK OF USE AND DYING OFF OF TREATMENT BIOLOGY COMPONENTS.**
- 7. MULTI FAMILY UNITS ON SMALL LOTS REQUIRE LARGER TREATMENT AND DISPOSAL SYSTEMS**
- 8. UNRESOLVED ISSUES**
  - CENTRALIZED MANAGEMENT SYSTEM**
  - OPERATION AND MAINTENANCE COSTS**
  - NON-COMPLIANCE IMPLICATIONS**

# LOS OSOS WASTEWATER PROJECT TECHNICAL ADVISORY COMMITTEE

San Luis Obispo County Department of Public Works



**Technical Memorandum - Low Pressure Collection System**

**January 31, 2008**

## **Finance Committee:**

### **Questions**

1. What is basis (rationale) of closing statement: "However, a fully LPS is likely not realistic for Los Osos." (Benefits of small pipe under pressure vs. large pipe Gravity, and reduced need for lift stations appear to compensate for added maintenance and energy relating to LPCS pumps.)
2. How much more would it cost to install larger sump tanks to provide back-up in event of pump failure and/or power outages?
3. How many homes will require grinder pumps under: 1) 100% LPCS? 2) STEP? 3) Gravity?
4. Please provide more specific information on electrical requirements for LPCS, e.g. 1-2 hp? Needing 120V, or 240V electrical? (1 or 2 additional breakers needed?)
5. What is total projected electrical load for entire PZ for: 1) 100% LPCS? 2) STEP/ STEG? 3) Gravity/ LPCS combined? And what are the implications (from PG&E standpoint)?
6. Do these cost estimates include provision for remote alarm/ monitoring systems? If not, what would the added cost be?
7. What is average cost per household or per linear foot for Low Pressure CS?

### **Comments:**

1. Figure 2 (right side) needs to be corrected, reversing limit of county and that of homeowner.
2. In order to make costs equitable, the cost of installation and maintenance of the grinder pump in the back of lot should be the responsibility of the project, not the homeowner.

## **Environmental Committee:**

### **Questions:**

1. What requirements might be developed by the RWQCB or the Coastal Commission in regards to additional storage in the event of power failure?
2. Would it be necessary to have a battery back up power supply to support the alarm system?

### **Comments:**

1. Additional attention needs to be given to the issue of maintaining the system in the event of a power failure. Including, an emergency maintenance plan that would need to be implemented in response to the local alarm system if large portions of the community lost power for a period of time extending beyond the 8 hours of capacity.
2. The TM estimates the volume of on lot disturbance as  $\frac{1}{2}$  of that for STEP, but calculations based on the dimensions provided in the TM suggest the disturbance volume is closer to  $\frac{1}{5}$ <sup>th</sup> that of STEP. A more detailed analysis is warranted, as reducing soil disturbance saves money as well as reducing a variety of environmental impacts.
3. Additionally, the on site costs of a low pressure system are identified as being the same as STEP, even though the soil disturbance is  $\frac{1}{2}$  or less.
4. Low Pressure has the benefits of the possibility of directional boring with installation, potentially reducing soil disturbance and therefore impacts to biological, archeological, and cultural resources. Even if open trenching is used, the shallower depth of installation relative to gravity would appear to reduce these impacts, as well as to reduce project costs.
5. There are equity issues and concerns raised in regards to the costs of installation and maintenance of backyard installations.
  - Easement requirements need to be identified and considered as an option.
  - The project should pay for all grinder pumps regardless of location of installation, as opposed to the TM Figures which indicate that some grinder pumps would be homeowner costs, and others project costs based on location.

## **Engineering Committee:**

### **Questions:**

1. (None)

### **Comments:**

1. A noteworthy conclusion of the preliminary analysis of the low pressure collection system (LPCS) is that three pump stations would be required to facilitate conveyance of wastewater to an out-of-town wastewater treatment plant.
2. A short-coming of the LPCS is its low reserve storage capacity during a power outage.
3. The State Water Resource Control Board (SWRCB) electrical standards for wastewater pumps should be reviewed and incorporated into the LPCS analysis. Local contractor experience suggests that the SWRCB has a more stringent standard than presented in the Technical Memorandum (TM).
4. The TM should provide a more detailed explanation of grinder pump responsibility. Figure 2 indicates the grinder pump installation will be a home owner responsibility if the pump is located in the backyard and a Project responsibility if located in the front yard.
5. The TM should provide more detail about how septic tanks will be decommissioned. The decommissioning costs are estimated at \$300 in Table 4 and 5. Does this cost

include septage removal and disposal? Currently, the costs for septic tank pumping alone are higher than \$300 quoted in the TM for septic tank decommissioning.

6. The TM does not address the infiltration and inflow (I/I) differences between LPCS and gravity collection systems.
7. In section 3.1 of the TM, the potential crossing of Los Osos Creek is mentioned as an issue. From the information provided during the development of the Pro/Con analysis, this was not considered a fatal flaw. Consequently, it should be removed from the TM.
8. The TM specifically states that the most common construction technique for LPCS installation is through open trench excavation. However, the cost estimates presented are all based on directional drilling.
9. In the last paragraph in section 4.1 of the TM, LPCS is characterized as having minimal access points. Wouldn't each lateral require an access point? If so, how does this compare with the other collection systems?
10. The Department of Public Health requires sewer mains to be separated horizontally from drinking water mains by at least 10 feet. In addition, all sewer mains, when crossing a drinking water main, are required to be at least 1 foot below the water mains and cross perpendicularly.

# LOS OSOS WASTEWATER PROJECT TECHNICAL ADVISORY COMMITTEE

San Luis Obispo County Department of Public Works



**Technical Memorandum – Decentralized Treatment**

**January 31, 2008**

## **Finance Committee:**

### **Questions**

1. Does the county plan to analyze a decentralized system using LPCS?
2. Why would the SWB/ RWB have more stringent nitrogen limits for a decentralized system, compared to centralized systems?

### **Comments:**

1. TAC would like the opportunity to review Decentralized when requested information has been received from Lombardo.

## **Environmental Committee:**

### **Questions:**

1. Is it possible to generate a “Table 2”(from TM #1) for decentralized systems?

### **Comments:**

1. Figure 1 on pg 6 indicates that significant cost savings may be realized through economies of scale by building a larger plant or plants as opposed to many small treatment facilities. (The source of the data and a legend are needed for this figure.) A ‘Los Osos specific’ financial comparison of building multiple smaller plants vs one larger plant is needed for the community to consider this option, and this analyses should include land acquisition, construction, staffing and maintenance, impacted resources, and energy use/carbon emissions.
2. The decentralized approach of multiple smaller treatment plants would multiply community concerns over siting a wastewater treatment plant close to homes and public facilities, and simply finding available locations for the plants appears to be a substantial hurdle.
3. Given the communities concerns over both cost and site locations, the feasibility of a decentralized system seems questionable and the EIR should examine this in more detail than presented in the TM.

## **Engineering Committee:**

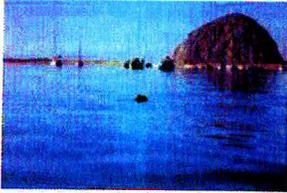
### **Questions:**

1. It is anticipated that the 30 plus new treatment sites would have to be re-zoned, what

additional requirements would that create?

**Comments:**

1. Discuss the need to prevent cross connections between the purple pipe system and the potable system.
2. More discussion on septage handling is needed.
3. More discussion on storage is needed
4. Flexibility for future regulation compliance or additional future treatment requirements appears to be lost.



## LOS OSOS WASTEWATER PROJECT

San Luis Obispo County Department of Public Works

### LOS OSOS WASTEWATER PROJECT TEAM CHECKLIST TECHNICAL MEMOS (TM)

#### Design TM

1. Low Pressure Collection System
2. Decentralized Treatment
3. Onsite Treatment
4. Flow and Loading
5. Regional Treatment
6. Facultative Pond Treatment
7. Imported Water
8. Solid Handling
9. Disposal Options Development
10. Out-of-Town Conveyance Options
11. Regional Septage

#### EIR TM

1. State Marine Reserve
2. AB 32/Greenhouse Gas



Public Works - Los Osos  
Water Treatment Project  
Sent by: [REDACTED]

01/30/2008 09:35 AM

Please respond to  
LOWWP@co.slo.ca.us

To [REDACTED]

cc

bcc [REDACTED]

Subject Re: Low Pressure Collection systems [REDACTED]

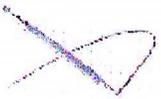
Bob,

Thank you for your comments, I am forwarding them to the TAC. They will be discussing the Low Pressure Tech Memo at their upcoming meeting on Monday, February 4 at 7pm at the South Bay Community Center.

I will also forward your comments to the Project Team so that we can evaluate them and make any necessary modifications to the final Tech Memo.

--John Waddell

Robert Stark [REDACTED]



Robert Stark [REDACTED]  
01/24/2008 11:11 AM

To LOWWP@co.slo.ca.us

cc

Subject Low Pressure Collection systems

## LOW PRESSURE COLLECTION SYSTEM

There are a few items in this report that you might want to give further consideration.

1. Note 1 in table 8 assumes electrical system remodels to be the same for STEP and a grinder pump. The STEP pump is ½ hp or less (about the size of a washer) that could plug into any circuit without any trouble. Grinders that are 1 to 2hp require 240 volts that means 2 additional breakers in service box. This is not something that all installations can do as readily as supplying 120 volts.
2. PG&E is concerned with total load as they have to be able to supply that at any time. A step system of 4800 pumps at 1/2hp each is 2400 total. A grinder system assuming an average of 1.5hp each totals 7200. This last total is significant.
3. Table 6 and other places use \$4000 for the capital cost of the grinder module which is reasonable. A comparable STEP pump module (not in the tank) would be less than \$1500. This \$2500 difference for 4800 units is \$12 MILLION. Not exactly small change.
4. There are many areas that could gravity flow as you point out. The ability to do this with a STEP system is easy and eliminates a pumping system which can not be done with grinders. It could be done with full flow gravity if you want to take this step backward. The potential savings for this idea is enormous if you look at adding a STEP booster station at all the places that MWH had a lift station.



Public Works - Los Osos  
Water Treatment Project  
Sent by: [REDACTED]

01/30/2008 09:35 AM

Please respond to  
LOWWP@co.slo.ca.us

To [REDACTED]

cc

bcc [REDACTED]

Subject Re: Comments on LPCS Draft January 2008 [REDACTED]

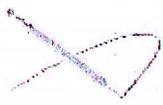
Don,

Thank you for your comments, I am forwarding them to the TAC. They will be discussing the **Low Pressure Tech Memo** at their upcoming meeting on Monday, February 4 at 7pm at the South Bay Community Center.

I will also forward your comments to the Project Team so that we can evaluate them and make any necessary modifications to the final Tech Memo.

--John Waddell

"Don Bearden" [REDACTED]



"Don Bearden" [REDACTED]  
01/23/2008 04:01 PM

To <LOWWP@co.slo.ca.us>  
cc  
Subject Comments on LPCS Draft January 2008

Project Team,

Here are some comments on the Technical Memorandum LPCS Draft, January 21, 2008:

1. Page 2 Figure 1 - Figure shows two drains outside the building, one with a P-trap and one without. What are these for?
2. Page 10 Figure 2 - House #2 seems to have the Homeowner's responsibility and the Project responsibility backwards.
3. Page 13 Figure 3 - I think you need to add two more Homeowner responsibilities: (1) Install electrical connection between home and grinder pump, and (2) Have existing septic tank pumped empty prior to backfill.
4. Pages 15, 16 Tables 4, 5, & 6 - I think the estimated cost of \$300 to Abandon Existing Septic Tank is too low. I estimate a total cost of \$800 to Abandon Existing Septic Tank, broken down as follows: \$500 to locate, expose lids, and pump existing tank empty, + \$300 to punch holes in bottom of tank, break up and collapse top of tank, and backfill tank with existing fill.
5. Page 16 Table 7 - Pumping out 4769 existing septic tanks at \$500 per tank prior to abandonment can add 2.4 million to the total cost.

Sincerely,

Don Bearden



01/31/2008 02:48 PM

To [redacted]  
cc [redacted]  
bcc [redacted]  
Subject Re: Comments on the decentralized TM [redacted]

David,

Thank you for your comments, I am forwarding them to the TAC. They will be discussing the **Decentralized Tech Memo** at their upcoming meeting on Monday, February 4 at 7pm at the South Bay Community Center.

I will also forward your comments to the Project Team so that we can evaluate them and make any necessary modifications to the final Tech Memo.

--John Waddell  
"Waterguy" <waterguy@ix.netcom.com>



"Waterguy"  
[redacted]  
01/30/2008 11:06 AM

To [redacted], [redacted]  
cc [redacted], [redacted]  
Subject Comments on the decentralized TM

Hello Mr. Ogren:

I was provided the link to the decentralized TM this morning, and spent a bit of time going over it. Obviously this is not a real thorough review and analysis -- as I do not have the resources for that -- but I trust you will find the observations offered to be thought-provoking. While I understand the intention that this is a "discussion level" document, I still found it disconcerting that it exhibited some of the things it did, as reflected in my comments. Please do not hesitate to call or write if you wish to discuss any aspect of my comments.

Best regards,  
David Venhuizen, P.E.  
Planning and Engineering as if Water and Environmental Values Matter  
www.venhuizen-ww.com

Your old road is rapidly agin'  
Please get out of the new one  
If you can't lend a hand  
For the times they are a-changin'  
-- Bob Dylan



COMMENTS ON decentralized TM.doc

## COMMENTS ON LOS OSOS “DECENTRALIZED” TECHNICAL MEMORANDUM

Potential barriers are simply noted, sort of as “boogey men”, with no apparent effort to meaningfully address them. Raises the question of just what is the purpose/meaning of this TM? The opening sentences says, “The purpose of this technical memorandum (TM) is to identify for further discussion a list of issues for the use of decentralized treatment with cluster/communal systems.” Fair enough. But what it fails to do is provide any clue as to discussion by whom, employing what expertise, paid for how, leading to what. What was the value of simply asking a lot of questions and failing to answer them, of posing supposed barriers and doing nothing to evaluate what they might imply? To simply lay out there some innuendos about the decentralized concept?

In particular, is it not an insult to the people of Los Osos to imply—as this TM seems to—that any effort to more explicitly evaluate a decentralized concept option would/should be vendor-driven, rather than an integral part of the overall evaluation process? Is this TM indeed implying that it would be up to LAI (or ANY vendor) to unilaterally provide the information and analyses deemed to be necessary from sources external to this project?! Therefore, the central question about this TM is – What is the “project team” going to do to more fully evaluate a decentralized concept strategy and flesh out this sort of option so that it can be fairly and meaningfully compared with the centralized strategies?

Presumptions about “economy of scale” the larger a treatment unit becomes – ignores the economics of transporting the wastewater. While this is peripherally addressed by way of asking questions about the LAI proposal, the innuendo is laid out up front, left to simply “infect” the uninitiated reader with the idea that economy of scale of treatment unit cost is a controlling factor, which is not true, since it is total system cost relative to the benefits obtained—including sustainability indicators that are not captured by first cost alone—that defines the overall value of any given option.

Soil dispersal, nitrogen removal issue, bears some closer examination – A review of considerations regarding this matter was provided separately.

The whole issue of septic tanks on lots to allow effluent sewerage to be used is tied to STEP with a pump on every lot as the only way to implement it, presumes the issues of pumps on lots are unavoidable. This is quite obliquely “modified” later in posing questions about the LAI proposal but is set forth up front and left to simply “infect” the uninitiated reader with the idea that STEP is inherently problematic because pumps must be on the lots. This is simply untrue, so for what purpose is it set forth in this manner?

Presumption of need for “external carbon source” to achieve denitrification – ties in to presumption that very low (<7 mg/L) total N is required prior to dispersal, again related to N removal in soil dispersal systems. Indicates incognizance of the sorts of treatment technologies that would be favored for use in decentralized concept strategies, even as it acknowledges that they are likely to be different from those that might be favored for highly centralized systems.

Operational issue – asserted that larger systems are more stable and able to deliver higher quality effluent. This is dependent on the technology employed, technology with flow equalization inherent in it is relatively immune, at ANY scale. Again an explicit statement of incognizance about the nature of technologies that would be favored in a decentralized concept strategy.

Assertion of backup power being needed is dependent on the design specifics and implications of the power outage on ability to get wastewater to the treatment unit. Yet it is stated as an absolute need, with the not-so-veiled implication that this makes distributed treatment units problematic. For what purpose?

A team of roving operators – makes it sound like they'd have to be hovering constantly. This is subject to the sort of technology employed and specifics of the design. In any case, the management system must be organized to manage the system implemented, a whole 'nother area of discussion.

The Title 22 requirement for daily monitoring applies to reuse applications with a high potential for human contact – this again is subject to specifics of system design. Later in the report, it is indeed explicitly noted that Title 22 restrictions would apply only to surface irrigation. Yet it is stated up front as an absolute barrier, left to simply “infect” the uninitiated reader with the idea that distributed reuse is highly problematic. For what purpose?

Assertion of need for long-term effluent storage for wet weather is set forth as an absolute need. This demonstrates incognizance of the ability of drip field to act as a drainfield at any time that soil moisture is driven above field capacity. Considerable information on this matter has been delivered to the County. May also indicate preoccupation with instantaneous concentration of total N in percolating effluent-derived water, while mass loading is the matter of concern.

However the effluent would be dispersed from a centralized plant, that remains available for the effluent from decentralized plants. Wheeling around highly treated effluent would be significantly less costly than a collection system for raw wastewater or septic tank effluent. There is no hint that such a consideration is available, rather it is simply presumed that distributed treatment would REQUIRE distributed dispersal, solely and exclusively. Incognizance? Or purposeful?

A centralized plant – high daily flow – would only require monthly or quarterly monitoring, even though very high quality effluent must be assured, consistently and reliably?! Really? There are any number of operating/monitoring concepts that could be employed to render distributed, small treatment units more fiscally reasonable to operate. Sure, these would have to be investigated with the regulatory system, but it is implied in the TM that high monitoring costs are an absolute and immutable barrier, rather than indicating any cognizance of such possibilities. For what purpose?

Comparing an effluent sewerage system collecting wastewater to small-scale distributed treatment centers to a town-wide STEP system is invalid, as the former would be of more limited extent and would eliminate all the larger pipes. Yet the TM sets this forth as a “reasonable” comparison. For what purpose?

Why would treated effluent redistribution lines need to be 10 feet from effluent sewerage lines? Isn't that a rule for POTABLE water lines? Why can't you just drop another pipe into the same trench carrying the effluent sewer lines? Maybe requiring 1 foot vertical separation.

It seems to be implied that the sort of STEP system previously considered is the ONLY way to do it, while there are options that might eliminate most pumps from the system when the treatment capacity is highly distributed. Again, this was implicitly modified in commenting on the LAI proposal, but that was after this idea was simply left to “infect” the uninitiated reader that STEP would be costly and problematic.

Seems to be a resistance to formulating an actual, realistic model of a decentralized concept system, rather a “generic” model totally molded in the image of the STEP system serving the centralized concept is “imposed” – then they also impose a cost for redistribution, apparently without regard to the relative benefits to the water economy of each option. Recognizing the “discussion level” of this document, still this is a very incomplete picture of the benefits and liabilities of the whole system. Purposeful or simply due to incognizance?

In order to derive the sort of more detailed information as referenced in discussion of LAI proposal, would have to formulate the system model. This would rationally have to be an integral part of the planning/evaluation processes. It is not realistic to expect anyone to invest this level of effort solely on speculation, in the hopes of getting a contract to implement that sort of system. Thus, this is a job that the “project team” must do, including the incorporation of the expertise needed to do it competently. Clearly, from the sorts of questions asked and assertions made in this document, the project team does not currently house that expertise.

The concerns about the large centralized activated sludge-based plant at Tri-W are in another universe from the concerns about small, distributed recirculating biofilter treatment units. To suggest that the “conclusions” of NWRI Peer Review Report has any significant bearing on this is, well, just flat strange.

One supposes there is a reason for the designation of “ESHA land”. There is no apparent effort to divine how dispersing highly treated effluent on some small percentage of the total land area covered by the designation might “violate” that reason. Thus, this whole issue remains to be defined and examined, as this TM has failed to do so. Rather it just points to it as a potential barrier, leaving it there to “infect” the undiscerning reader.

There definitely was a reason for designating the “Prohibition Zone” (a reason that is hotly contested by some in the community, by the way). This TM seems to imply that the prohibition of “discharges” within the zone is a “good” in and of itself, disconnected with the reasoning for its formulation. So instead of examining if/how any option that would propose to “discharge” within the zone satisfies the reasoning for the “prohibition”, this TM simply points to it as a barrier, without analysis, leaving it there to “infect” the undiscerning reader.

## STATEMENTS OF FACT

Fact: No homeowner is legally obligated to provide "sewer" to a publicly owned utility without FIRST complying with pretreatment requirements.

Fact: All homeowners have full authority to eliminate their discharge on their own property using best available alternative technology which eliminates discharge.

Fact: All homeowners have rights to use 100% of their water purchased.

Fact: Domestic sewage is a source of the toxic pollutant known as nitrosamine, a high level carcinogen list on the USEPA Toxic Pollutant List.

Fact: As such source of such "toxic pollutant", it must meet pretreatment requirements, even if discharged into a publicly owned collection lateral.

Fact: The RECLAMATOR, as such a pretreatment technology, eliminates the discharge associated with each property. (the meaning of discharge is "discharge of pollutants")

Fact: Under such scenario, a publicly owned collection lateral would be redundant, unnecessary, represent double taxation, etc., besides non-compliant.

Fact: Recycled (reclaimed/repurified) water is a "valuable resource", especially the creek quality water produced by the RECLAMATOR.

Fact: Any assessment placed on a private home to pay for a publicly owned sewer service will first go to pay for the pretreatment requirements defined in federal law to be met. (even though they haven't for the past 30 years because no one had ever caught them not complying with the federal law with this pretreatment requirement until now)

Fact: The RECLAMATOR, as the required pretreatment, eliminates the need for a publicly owned sewer lateral as it eliminates all discharge from the source, i.e. private house/property.

Fact: The RECLAMATOR, as the required pretreatment, eliminates the need and the legal requirement for a publicly owned sewer collection lateral as it eliminates all discharge from the source, i.e. private house/property.

Fact: No one can take a person's personal property without purchasing it at fair market value. Purified water, as a valuable resource, is subject to being purchased by anyone who receives it, especially if by demand.

Fact: The purified water produced by the RECLAMATOR, as a "valuable resource" per California Water Code §13050 will have to be purchased by the

public utility who takes it. (Market value of the RECLAMATOR purified water is 5Xs the cost of the public water supply.

Fact: In order for a public utility to borrow funds to build a sewer project, the public utility borrower (the County in this case) has always had to (and would again in the Los Osos case) guarantee a 100% hook-up, i.e. guarantee a revenue stream from each property within the sewerage area via an "ordinance" requiring each property to hook-up so as to pay back the loan for the sewer.

Fact: This always worked before as there were no RECLAMATOR like technologies which eliminated the "waste" at the source (onsite) from the home wastewater flow, thus, the homeowner had no choice but to hook-up and pay.

Fact: All currently existing onsite wastewater treatment systems besides the RECLAMATOR are just that, they ONLY "treat" wastewater but still discharge pollutants, thus any property with one of these were still required to connect to a publicly owned sewer lateral upon it coming available so as to eliminate the discharge of pollutants into the soils.

Fact: The RECLAMATOR was the first and is the only alternative that "treats" wastewater to the state of "purification" which meets the non-enforceable standard of the EPA.

Fact: When the County lender (bonding company or who ever is approached for the loan by the County) is made aware of the new technology that makes purified water that will enable any household to eliminate their own waste and produce "water", a valuable resource which will have to be "purchased" if taken from the property of the homeowner, they won't make the loan due to a high risk factor for payback. (it is only money business)

Fact: Once the lender is made aware of the fact that, even after a property is connected to a sewer, a property owner STILL has the right to install the RECLAMATOR and reclaim his own water and disconnect from a sewer along with stop paying for a publicly provided service no longer needed.

Fact: Upon such a homeowner doing so, he will no longer have a legal obligation to pay a "monthly sewer fee", consequently, the revenue stream necessary to pay back the lender for a sewer project will no longer exist and the payback of the loan would be jeopardized. No lender will loan to the County under this scenario.

Fact: The "RECLAMATOR" is the proverbial "straw that breaks the camel's back", eliminates "waste" of water and makes a publicly owned sewer no longer able to be cost effectively implemented as "a publicly owned sewer lateral" now is ONLY OPTIONAL, NOT A LEGAL REQUIREMENT. All discharges are now terminated at the source upon meeting federal pretreatment requirements with

the RECLAMATOR. There is no longer any discharge of waste to be collected from the source (private property) via a publicly owned collection lateral (public jurisdiction).

Fact: The RECLAMATOR isn't a wastewater treatment system but rather a household in-line water purification device, similar to a hot water heater, a water softener, dishwasher, washing machine, etc. These in-line household appliances receive drinking water quality water and produce wastewater; the RECLAMATOR receives the wastewater and produces creek quality (drinking water quality) water.

Fact: The RECLAMATOR has demonstrated and been certified by professional engineers to produce purified water not a discharge of waste as has been previously purported by the RWQCB.

Fact: The RECLAMATOR establishes the National Standard of Performance as best available demonstrated control technology (BADCT) which eliminates the discharge of pollutants.

Fact: The RECLAMATOR, as BADCT, is required to be applied at every point source discharge (home/property having a sewer discharge) as the federally required alternative pretreatment technology BEFORE discharge from said property into a publicly owned treatment works.

Fact: As BADCT/National Standard of Performance, all alternative water source demonstration projects utilizing the RECLAMATOR will qualify for federal grant assistance of up to 75%.

Fact: No other pretreatment/alternative onsite wastewater treatment technology, such as the Nitrex (or any other) system, qualifies as the BADCT/National Standard of Performance. Consequently, no other pretreatment/alternative qualifies under the federal public interest cost-effectiveness criteria for federal grant assistance, as only the "best" pretreatment/alternative qualifies for grant assistance and no other pretreatment/alternative compares with the RECLAMATOR as the "best". Because no other pretreatment/alternative technology qualifies as the "best" to qualify for the federal grant assistance, why spend taxpayer's time and money to consider such inferior technologies for the Los Osos Project?

Final Fact: SEWER GAME OVER! Just make the lender aware of the new facts the RECLAMATOR brings, A GUARANTEED PAYBACK IS NO LONGER POSSIBLE! No lender will lend money which cannot be guaranteed to be paid back.