

To: Mark Hutchinson, SLO County, LOWWP Staff

From: Alon Perlman, Los Osos. CA

Date: January 29, 2009

Re: LOWWP Draft EIR Comments submitted herein

This communication is to comment on the Los Osos Waste Water Project Draft EIR. It is intended for inclusion in the EIR.

The primary intended audience, are the professionals and experts involved. Therefore most of these comments are arranged in sequence matching the DEIR organization. It is suggested that this submission be read with a copy of the DEIR present.

Sections regarding Broderson recharge seawater intrusion and Tonini sprayfields are expanded within the text and are more general in discussion due to subject matter.

Members of the Public and non-technical readers may find the some discussions within each section more useful Also the last paragraphs on this page and the next are also meant mostly for general public reading and to provide a context for others.

It is intended that this entire submission be responded to in general and in specific. Statements included in this submission should be responded to irrespective of whether they are formed into a discrete question or not. Many questions have been underlined but there are a few that are comingled in statements. Responses are requested for all question marks (including this one?)? Comments may be preceded with a heading as to the type of issue. Typographical errors correction suggestions as well as large issues are intermingled. Specific attachment and inclusions and external evidences are submitted as well.

Due to the size of the appendices it is not possible to eliminate duplication but it is believed that the nitrate maps prepared by District engineer and TAC member Rob Miller may be first submitted here and are unique and not in the DEIR, Similarly the graphic in the produced by SLO APCD and located in Air Quality section is not believed to be referenced. It was not originally intended to include as many photographs but personal constraints for time prevented more text or full citations.

The author of this submission has worked as a clinical microbiologist, a research microbiologist, written clinical trial research protocols, was certified as a regulatory affairs professional (FDA) and participated in multi-disciplinary teams. Where specific supporting documentation is too cumbersome, this author may use arguments based on BASIC SCIENTIFIC PRINCIPLES. Assumptions based on "Biological plausibility" are acceptable to regulatory authorities, similarly hydrological, and chemical effects. Reviewers of these comments are requested to vigorously challenge the scientific plausibility of the comments or assumptions made by this author.

Los Osos is a home to many fine people from all walks of life including active and retired educators and professionals, scientists and regulators. One of the affects of the politicization of the various sewerings and stoppages in Los Osos is that there is also a cadre of highly involved and active, amazingly educated, partly educated, experienced through life and profession, knowledgeable, apparently knowledgeable, individuals and groupings. And then there are some possessing a little knowledge, to a dangerous degree. For that reason the page also addresses those who may only read the first pages.

There is a short summation at the end of the review, there the fatal flaw is discussed.



DISCUSSION ADDRESSING THE GENERAL PUBLIC:

Los Osos is built on a series of, now fixed, historically shifting dunes, that created a layered sand filtering system composed of layers of the unique Baywood fine sands, clay, and gravel. That system produced what was advertised in the 1930's as the best drinking waters in California. The earlier developer also deliberately constructed many long narrow lots selling them 2 apart for a low amount, expecting that the owners, as they start to develop, will buy up the empty adjacent lot.

For tens of thousands of years this area has been inhabited by humans and has, even for those earlier and in some cases, seasonally nomadic civilizations, has ALLWAYS served as a retirement village. The tidal exposure of clams, an easy protein source, oak seed pods availability, the presence of clean water sources, and a mostly mild micro-climate made it possible mostly in an area bounded by little over four square miles and continuously habituated by humans. In the present day a serene beauty is maintained, enjoyable with little to break the silence other than the chirping of birds, and the occasional crack of a shotgun as bird hunting season overlaps the recent Bird festival that brings much needed tourist dollars here and to the nearby town of Morro Bay.

Currently, thanks to action taken by individual Citizens and agencies of the state, a green belt was created. Additionally the area is still relatively free of encroachment due to the Williamson Act's preservation of Agriculture, and County planning policies. Historically referred to as South Bay, or Baywood Park, The Town is known as Los Osos.

Jutting into the cleanest estuary in the US west coast and whose self-sustaining water supply is dependant on the halting of seawater intrusion. High nitrate levels Private properties separated by empty lots containing in some cases habitat for endangered species or active riparian habitat serve as additional wildlife corridors connecting the green belt(s) with the Bay and Estuary.

Review proper

General comments

For detailed discussion and of Sprayfield disposal see also the section of Public Health.

Expanded section B-1: Proposed Projects Descriptions information was used *“Because the effluent disposed at the sprayfields would likely not meet Title 22 tertiary treatment standards, the sprayfield area would be fenced off to **prevent public contact with the water**”* .

Though it is appropriate to use questions, this reviewer is not able to avoid stating that (and as presented to the SLO counties supervisors) applying secondary treated wastes to agricultural lands or to replenish a reliable thousands of year old aquifer and a still mostly intact sand filter that created, it will not work.

Will the EIR requestor (the County) ensure that additional processing will not be required

Section 5.1 Land Use and Planning

Subsection 5.1.5 page 5.1-1, 2

There is a short statement of “no significance, or less than significance”, effect however the population contains a segment of seniors on fixed income. It is likely that a large amount of that segment will be forced to sell their homes due to the burden of what may be an overall increase of cost of services and infrastructure as high as 300\$ per month (projected by this reviewer based on accuracy of last two projections in early '95. Unplanned migration out of the area and increased need for social services, is likely to burden the county and cause unforeseen changes in land use unaccounted in current planning documents. Why are demographic alterations not considered a land use effect.

Why is the affect of the project on tourism not considered?

Has the effect of the sprayfield on bike trails at Turry road adjacent sprayfields been considered? this could conflict with county plans for area and within the transportation section there is no mention of it, please confirm?

Section 5.2 Groundwater Resources

Subsection 5.2.1 page 5.2-2

General Discussion

There is expected to be extensive submissions by others on this section.

Key to note that 631AFY are attributed to septage return flow. It is not clear from this section what percentage of that flow is due to prohibition zone septic and will cease once a project is underway, and what percentage is due to septic within the town and within the same element within the Sub-hydrologic unit but that are located outside the prohibition zone, and will not be subject to discharge prohibition?

Once the project is built how much of 631 AFY expected to decrease? And why not use 600 AFY as in the comparable discussion on the expanded section Appendix "D" 5.2-7.

P 5.2-3 How will 470 AFY of seawater intrusion be expected to increase? (should also be specified for intended Broderson leachfield at 0, 50% and 100% presumed capacity recharge, or under other conditions of intended use)

Global Warming scenarios abound. This Author prefers a forecast of Sea level rise of no more than two inches in the next decade and “anybody’s guess” thereafter (on average, during High tides the effect would be magnified). This means that in the life of the project (30 years), hydrological pressures will continue to drive Salt water intrusion.

Zone D lower aquifer Salt water advance is stated to be between Pecho and Doris St. Zone E is stated to have an advance further along between Broderson and Palisades.

1. What are the projections for current location of the salt line, since the DEIR uses 2005 figures (each zone)?
2. What are the projections for the location of the salt line at the point in time that (project is complete, and) reclaimed waters are scheduled to enter the Broderson leachfields ?
3. Given that the salt water intrusion is essentially at Broderson; Can it be confirmed that increasing the head at that point would not dilute and push brackish water into the very zones that Broderson recharge was originally intended to protect (Brackish-less concentrated than sea water but impossible to drink, hard to desalinate) ?
4. In section 5.2.3 , can “Thresholds of significance” under CEQA (select ones listed below) be held to be “less than significant”, if 2013 salt water advance predictions place Broderson recharge pushing the saltwater East (inland) as discussed previously.
5. The “salt line” is assumed by this reviewer to pass diagonally towards North -East (as opposed to a line going straight north as the roads do). Where further north (and slightly East in the Baywood district is there intrusion? What can be done about recharging the aquifer in that area? If intrusion continues from that direction will it not make an eventual end around the Broderson solution.

“For Hydrology and Water Quality Environmental Issues, would the project:

a. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

b. Otherwise substantially degrade water quality?

c. Conflict with local programs or policies related to groundwater quality or water supply?”

5.2.4 - Level of Significance Prior to Mitigation

Less Than Significant or No Impact

5.2.5 - Mitigation Measures

No mitigation measures are required.

Why is the Broderson recharge not considered as a mitigation (at least as a comment)?

5.3- DRAINAGE AND SURFACE WATER QUALITY

This section includes a submission of Nitrate influence maps (appendix)

and a submission of maps and photographs of the minor drainages that represent the Bay outfall of storm water

Page 5.3.1 Area coastal and inland precipitation values are given. Rainfall estimates at the Tonini Sprayfields are not given, nor are numbers of rainy day estimations given though those could affect how the relative use of Broderson or Tonini Sprayfields.

Elsewhere, the project is stated to shift treated effluent application from Tonini to Broderson during the rains. Why are these values not presented and what are they?

P 5.3-3 SITE FLOODING. It should be noted that due to global weather changes the 100 year flood plains described at Warden Creek are likely to experience 100 year floods (as defined in 20 year old plans) at a more likely frequency of every 50 years. This likelihood is increased as the project lifetime may be 30 years. (members of the public should understand that 100 years is the measure of time expected to pass on average in which the next very high flood would occur, that does not exclude the possibility of such a flood from occurring say, tomorrow)

P 5.3-4 **5.3.3 - Thresholds of Significance**

“d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? “
Can the Hydrology and Water Quality Environmental Issues quoted above be maintained as “Less than Significant” given that the county is constructing a storm water system (Pallisades Signal Project) letting out at the midtown site almost directly downhill and within the subsurface flow patterns expected to have contribution from the Broderson Leach field?

Tonini ranch contains two tributaries to Warden Creek. With disposal through sprayfields of up to 500 AFY (Evaporation would reduce the larger numbers applied, and Sprayfields would not be used during rain events, but the drainage area could be assumed to be close to saturated from prior application). Would the excess water at Tonini not contribute to the likelihood of more serious flooding than if not applied at all? Is this not a significant impact?

5.4 – GEOLOGY

Time constraints do not allow full review of the references, It is intended to submit additional questions after the DEIR submission process.

Only the potential for liquefaction at the Disposal site during rains will be addressed here in detail (Broderson, all projects) At this point of review, this reviewer does not believe that (if of high level of treatment, and depending on location of salt water intrusion advance, discussed elsewhere) a controlled portion of waste waters applied to Broderson during the dry season would necessarily be a problem.

The following questions are submitted with reference to the discussion presented herein. The section in the DEIR Page 5.4-9 is considered incomplete and is quoted below. Please respond to all the discussion elements, and consider a revised paragraph in the final EIR.

Elsewhere there is consideration that the project intends to build a head of pressure of 17 feet in order to combat sea water intrusion. During rains the spray fields will not be in use and the waste origin water will be shunted to Broderson.

Under normal conditions Groundwater is stated to be 100 feet below the leach field. It should be noted also that the first few feet of loose sands are described as a part of the project to be removed and replaced with rocks etc... The description quoted below does not describe the PROJECT soil conditions, since the near surface loose dune sands will no longer be present (the sands will however be present nearby, downslope from the application site and above the dwellings beneath it).

“The proposed effluent system at Broderson would be located on a relatively gently sloping hillside approximately 1,200 feet south of Highland Avenue. Based on previous investigations, the depth to groundwater is greater than 100 feet below the existing ground surface and except for the near-surface loose dune sand deposits, the deeper soils encountered beneath the site are generally dense and not susceptible to liquefaction or seismic settlement. The near-surface loose dune sand would not be considered potentially liquefiable.” (Reviewer underlined) Page 5.4-9

Time does not allow this reviewer to confirm that the “generally dense soils beneath the site” are consistent with the description of the site as suitable for quickly transporting water to the aquifer below” and also brings a concern that soil contact post disposal would be adequate for further processing of the wastes.

It is also incorrect not to mention that immediately above (South) are present significantly steep hills and the rainfall on them is expected to arrive at the leach fields and the ground beneath them by surface or subsurface transport (This soil science non-expert is of the impression that water flows downhill).

Since the ground will be potentially saturated (Broderson is sloped and at the bottom of a hill) from the treated water applied previously to achieve the head, from prior rains and from simultaneous application of the additional shunted treated water and the rains that caused the shunting; can a no impact be justified?

(Tonini and Broderson may not always experience the same rainfall but it can be expected that, especially with changing weather patterns, simultaneous heavy rains at both can be expected a significant portion of the time during rainy season)

Since the head is raised by additional inputs and the functional depth to groundwater is decreased, can it be determined that there will be no escapements (flows) away from the site and to the vicinity of nearby dwellings in the area, all below the site?

Can it be determined that in the case of heavy rains and the simultaneous application of Tonini sprayfield shunted flows, that the ground around the residences who may experience higher than normal stormwaters (rain that can no longer percolate) or combined rain wastewater flows?

Given all elements of the discussion above please justify the following EIR Determination of:

The disposal site is identified in as having no potential for liquefaction or off site landslide ?

Separate but related issue

Table 5.4-1 (Cont.): Geology Significance Determination,

Disposal Section

Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? **PS= Potentially significant.**

Why is the Disposal section identified in this table as PS=potentially significant for off site disturbance but appears to be contradicting the previous determination and is there is no discussion at all in the DEIR near Page 5.4-15 or in appendix F where it should had been explained?

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: **NI=No Impact**

Seismic-Related Ground Failure Impact 5.4-C:

It is noted that the Collection system is identified in this section to be under 5-10 feet of ground surface, the projects are not coequal in this regard as to depth of piping. Why are projects 2, 3, 4 compared as “same” as Project 1 with shallower pipes? Why are the conveyance system elements including returns lumped within the heading “collection system” in this section?

“Project-Specific Analysis**Proposed Project 1**Collection System

Loose sand blankets are located within the upper 5 to 10 feet of ground surface area over most of the collection system area. Portions of the collection system network traverse areas having a relatively high potential for liquefaction. The potential for liquefaction and seismic settlement to impact pipelines may be governed by the depth of the pipeline relative to the depth of liquefiable soils. The proposed collection system for Proposed Project 1 may experience significant liquefaction impacts. Furthermore, this potential significant impact could result in pipeline breaks and release of untreated and/or treated effluent along the proposed collection/conveyance system, including within Los Osos Creek and Warden Creek.”

Table 5.4-1: Collection system Would the project result in substantial soil erosion or the loss of topsoil? **PS=potentially significant.** There appears to be no discussion at all in section **5.4-E.** Project 1 would be likely to cause easily detected erosion in a case of pipe failure, Project 2, 3, 4 being deeper could have undetectable and more substantial over time subsurface erosions leading to later surface erosion. Where is the discussion?

Disclosure: This reviewer had prior access to another person’s review report on this subject, and while that long review was only given a cursory glance, it is felt appropriate to make this disclosure, as plagiarism plagues the Los Osos sewer experience.

5.5 - BIOLOGICAL RESOURCES

This reviewer cannot tackle this serious subject within this modest review and hopes to expand the issues after the deadline with a post DEIR deadline report. Personal observations (I found my first extended live Sholder banded and duly reported it to the monitor present in the work party, some weeks after the release of this DEIR) are that work has been halted on the Audubon Societies’ work at Sweet Springs nature preserve and the Small Wilderness Area Preservation (Weed Warriors) work at Elfin Forrest. This is due to a lack of monitors. Restrictions are much tighter than when the data were collected for documentation that is referenced and, and elements of these projects conceived or designed (prior EIR).

Mitigation for “Morro Shoulderband Snail 1, 2, 3, and 4

5.5-A4 *Prior to project approval, a biologist authorized by the USFWS shall conduct intensive surveys to identify and relocate all snail specimens within the proposed impact area on the Broderson and Mid-town properties, and all suitable habitat areas within the proposed collection system. Only USFWS authorized biologists shall survey for, monitor, handle, or relocate Morro shoulderband snails.”*

Reviewer underlined

How is the project going to be able to get sufficient coverage of biologists? How much time before work resumes?

The sholderbanded snails thrive in the non-native Iceplant and do well in the moisture pockets created by the association of chain-link fence poles at the midtown site with the sandbags that anchor them. The ever invasive Veldgrass that the work groups remove, is not considered supportive habitat. The migratory Monarch butterflies have similarly adapted to the presence of historic (non-native) Eucalyptus groves.



5.6 - CULTURAL RESOURCES

This section has been anticipated due to prior project design and its mitigated effects are known. Projects are recognized to have effects, Laws affecting non disclosure to prevent disturbance is in affect. And the county is in contact with the sovereign nation of the Chumash and other knowledgeable people. Full review his section is skipped by this reviewer.

On a observational note, A room full of archeologists came to a concurrence that "pretty much all of Los Osos dunes and the valley is of archeological significance", while under the project this will be recognized. County and state treatment of private property may differ.

Edit note

Archaeological Resources

There appears to be missing part of a sentence at the end of the table

Table 2-9 on page 2-41 Mitigations (all)

5.6-B6 Preconstruction monitoring shall occur in areas ranked as high in sensitivity for buried deposits. Two such areas have been identified within the proposed project area: (1) along Los Osos Valley Road from Los Osos Creek east to the Cemetery Parcel; and (2) in the western portion of the Tonini Parcel. Mechanical backhoe trenching shall be conducted within the --There is nothing after "the"

The missing part is in "Cultural Resources 5.6-22 Table 5.6-3 (Cont.): Proposed Mitigation Measures

5.7 - PUBLIC HEALTH AND SAFETY

While this Section was intended to be fully reviewed, time does not permit adequate review and additional material will be submitted separately and may not be included in the EIR directly but as supplemental material.

General discussion

There has been a lot of talk about “emerging contaminants”, the emerging contaminants that have the potential to affect this project the most are not necessarily the ones in the magazines or the peer reviewed scientific journals or even in a research laboratory. They are not known yet, but they are in the waste stream already, and possibly in some amounts in our bodies.

There is a difference in infectious loading within the conveyance systems of Project 1 STEP/STEG and the other 3 projects (Gravity) but this reviewer cannot detail the evidence due to time constraints.

The following discussion and questions are also appropriate to be included in the **Air quality** section.

The word AEROSOL does not appear in this health section. Aerosol is the mist created along with droplets of secondarily treated waste water sprayed at the sprayfield), and is carried in the air. nor other droplet transport to human contact is mentioned, **Why?** Secondarily treated water when inhaled or in contact with skin is toxic when in quantity or in longer exposure. Eye contact is also a concern.

Turry road is a bicycle path within a county planning sphere and reference should be made to the fact that the spray fields, as drawn on the EIR maps, appear to be immediately adjacent to about 3,000 feet worth of bike path. Are affects on local plans not recognized as an impact? And/or an impact category?



Ag mitigations are better

Provide fencing of areas currently grazed on the Tonini parcel, and a buffer between the boundary of the disposal area and areas currently grazed. The width of the buffer shall be determined in consultation with the San Luis Obispo County Agricultural Commissioner’s office. The Cows are protected

Disposal at Tonini spray fields

It is noted that spray fields, though discussed at the TAC, were a relatively new addition to the project description section 3. There appears to be understandably but inexcusably little information or analysis in other sections of this DEIR. Please discuss fully the overspray of water containing increasing Concentration of secondary pollutants?

Discussion

“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” and

Appendix B: Project Description Data 7.1.1 Sprayfields

“Sprayfield disposal is the practice of spraying effluent on land to dispose of the water through evapotranspiration and percolation. Soils on the sprayfield surface area of the Tonini Site as shown on Figure 7-1 represent reasonable material for spray applications. Sprayfield disposal would require secondary treatment. Sprayfields would be operated to maximize evaporation and minimize runoff. This would entail spraying only during the daytime and collecting any tailwater (run-off) and returning it to the sprayfields for reapplication. Disposal would occur through evapotranspiration, or through both evapotranspiration and percolation.”

As the spray leaves the sprinkler heads under pressure, very small droplets form. Some are light enough to form a mist. Under mist conditions these will stay (along with naturally condensing moisture in the air) as a fog and may travel far. On hot days they would evaporate completely. If the water was pure, that would be the end of the cycle.

The middle of the cycle in waste water disposal is more complex. Since there are; biological particles, pharmaceuticals and their breakdown products, coffee, and thousands of different chemicals and minerals, some dissolved, some in small particles, (Turbidity is not zero) some gasses in the water being sprayed, these will be found in the droplets. As the large and small droplets move in the air they lose moisture and become smaller. At some point some gasses and chemicals causing odor (mercaptans for example; as in skunk odor) will also leave. Some droplets will become very concentrated. Some chemicals other than water will remain. Most of these droplets will hit the ground more concentrated than permitted by regulations to leave the sprinkler head (per gallon if you were to collect them).

If almost all, or all of the water evaporates, and the droplet decreases, so it is as small as a speck, light enough to stay in the air and travel (size range of particle of combusted diesel residue-see cross reference to Air quality-Expanded Sec05-09) If the particle is light enough to stay suspended in the air for a good while, it can be stated to be in aerosol form, and can be carried in the winds for days or for miles. Since a portion of what went into the sewer from the houses will still be in secondary waste water (though at lesser amounts), a small but significant amount of the wastewater chemicals will end up well off the project site.

Affect of the cumulative transport of wastewater constituents off the property , as aerosols, in this DEIR, appears to be ignored for health and (understated for agriculture) please comment?

Waste is also rich in the proteins and fragments of proteins of bacteria. The bacteria (at least those that made it this far, after many generations of being eaten by other bacteria)

aren't as much an issue if tests confirm they are destroyed in the final stages of the secondary treatment. But those biological fragments are very stimulating to the Human immune system. Call them potent Allergens. Those can be carried for miles.



“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” Tonini Site Outlined in Light Blue. The Crops in foreground are not on the site

Will the County public health department be noting and following potential increases in reports of Asthma and Hay fever in the area? Is there a management plan? Mitigations? While this Section was intended to be fully reviewed time does not permit adequate review and additional material will be submitted separately and may not be included in the EIR.

Cross reference Health to Air Quality

*“The smaller suspended particles in PM_{2.5} typically have a combustion origin, or result from the oxidation, chemical reaction, recombination, adsorption, and/or coagulation of diverse **aerosols** and gaseous air pollutants. “These smaller particles, which can be as tiny as larger molecules, remain suspended in the air far longer than coarse particles, for periods of days or weeks. Therefore, regional meteorology plays a main role in the movement of these finer particles, and in the atmospheric chemistry that affects their transformation. In fact, transport of particulate air pollutants from distant major urban areas does sometimes play a role in local levels observed in the County “*

Cross reference health to agriculture

Agriculture Page 5.11-7

*“There would be indirect impacts within the Tonini parcel due to **accidental** spray dispersing beyond the direct affected areas (refer to Mitigation Measure 5.11-B1 below) into grazing or stream buffer areas.*

Impact 5.11-B: The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

1,2,3, 4 and

Cumulative

5.11-B1: Provide fencing of areas currently grazed on the Tonini parcel, and a buffer between the boundary of the disposal area and areas currently grazed. The width of the buffer shall be determined in consultation with the San Luis Obispo County Agricultural Commissioner’s office.

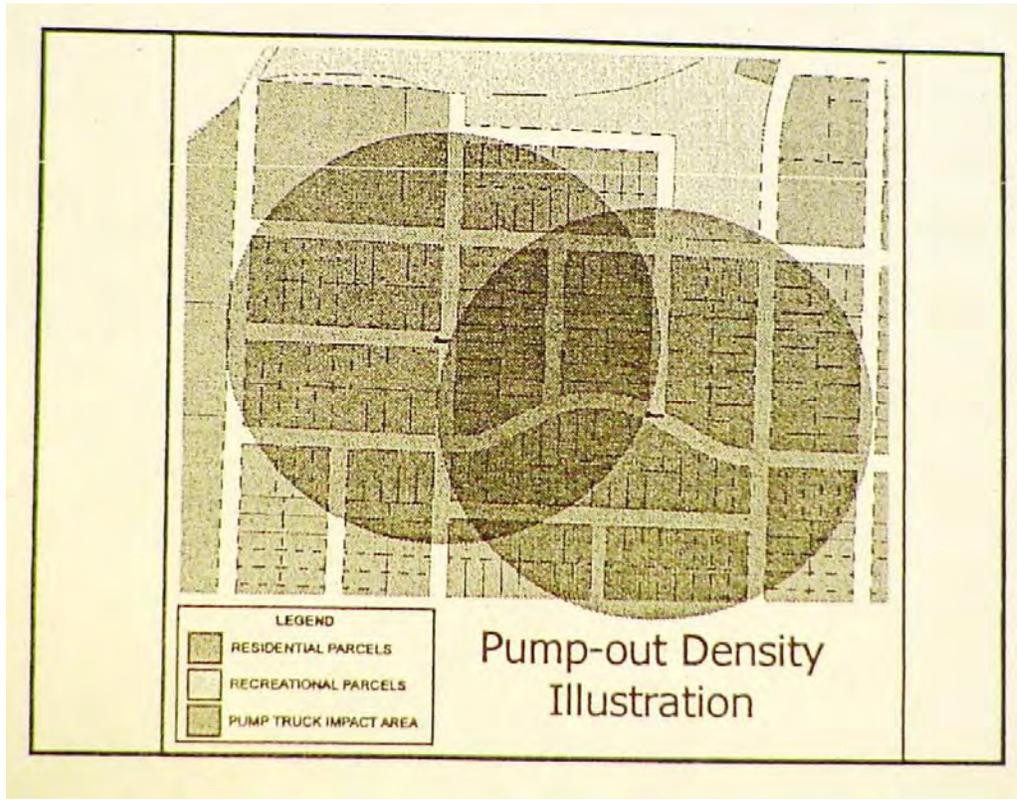
Impact Significant and Unavoidable.

Source Table 5.11-2: Agricultural Resources Proposed Mitigation Measures”

“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”

Agriculture Page 5.11-7

*There would be indirect impacts within the Tonini parcel due to **accidental spray dispersing beyond the direct affected areas** (refer to Mitigation Measure 5.11-B1 below) into grazing or stream buffer areas.* Expanded Sec05-09 Air Quality.doc



“Air Quality Implications
Los Osos Septic Tank Pump-out
Project
April 29, 2006
Presentation to RWQCB”
(SLO Co APCD)

The slide title shows that prior assessments were made for potential Los Osos projects by the Air Pollution Control District

- (The bi-monthly pumping order, raw data, 27 truck trips for 82 pumpouts)
- Diesel Exhaust Particulate matter is #1 airborne carcinogen in California

Mitigation

“5.9-C2 Prior to initiating grading activities, the proponent’s contractor or engineer shall:

a. Include the following specifications on all project plans: One catalyzed diesel particulate filter (CDPF) shall be used on the piece of equipment estimated to generate the greatest emissions. If a CDPF is unsuitable for the potential equipment to be controlled, five diesel oxidation catalysts (DOC) shall be use”

This reviewer interprets this mitigation to mean that there is a ranking of importance in this mitigation although this is a good compromise for some other density it is doubtful the APCD would allow anything but the highest level of filtration in an area that is likely comprised and assessed to be all sensitive receptors and not only schools and nurseries. Please confirm this mitigation is valid so that contractors can bid appropriately?

Greenhouse Gas Emissions

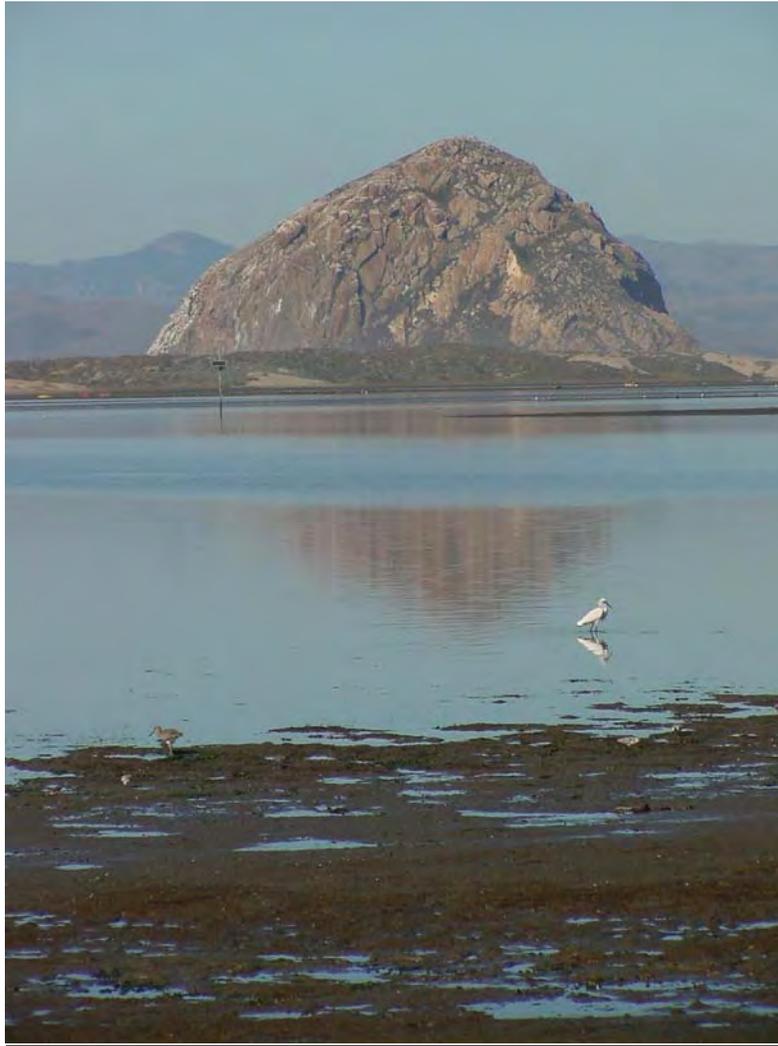
5.9-F: The project would not result in an increase in greenhouse gas emissions that would significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32.

Project-Specific Impact Analysis

Effectively a wash in the opinion of this reviewer. Due to operating under the structure of "Meeting Thresholds", all projects are considered the same. This makes it harder to review "co-equal analysis" in order to identify or quantify the best project. But that is not the regulatory primary concern. The regulatory body is interested in mitigating and protecting for maximum health and environmental protection.

This discussion is specific to the carbon cycle as it applies to the grasses grown on Tonini Sprayfields.

In order to grow as a grass the plant sequesters carbon dioxide (which is good, trapping a green house gas). After transportation to the landfill, the grass decomposes re releasing some of the carbon dioxide (which is ok) and methane (which can be collected as fuel which is good, or allowed to escape into the atmosphere which is bad) unrecovered methane and other released decomposition gasses can be worse green house gasses. Is potential recombination, release of methane an affect? Is it recognized in the DEIR? Mitigated?



5.10 - NOISE

Professor and TAC member Dave Dubbink has submitted on this section. There have been many conversations and details

This is meant as an addendum for the detail oriented review responder.

And to reinforce a reluctance to have Pile driving even considered in this quiet bird loving town, especially in low distance to and almost surfacing ground water area for reasons of conduction of sound and compression waves in wet sand

At this time an this (AP) reviewer of impact on nesting snowy plovers has not been confirmed or negated

TABLE

5.10.4 Thresholds of Significance- CEQA Guidelines G.

a.) Exposure of persons to **or** gen. of noise >Standards established in **local** general plan or other agencies...resulting Permanent increase. No non-person non-structure environmental impact listed ? this a natural environment

f.) Other Policies- Conflict with policies in the general plan. (what about tourism?)

Table 5.10-1 Collection-Treatment-Disposal subdivided by "Impact" sound effect category by 4 project comparison.(typo? Subheading f. missing)

There are other issues regarding organization. Why is the Back up generator discussed in the Permanent section a. and not c.

Page 9

Project 1 CBG ponds; Observation 1 -Aeration noise of 46 dBA exceeds 45 night limit at **200 ft to residence** (Permanent). Back up generator (*temporary*) 65.6 dBA . 20 dBA is stated as a **minimum** attenuation by structure "therefore, stationary noise impacts... could create a significant noise impact". This section (page 5.10-10) is flawed in presentation in that it failed to calculate **65.6 dBA minus** attenuation of **20** is **45.6 dBA**, barely above threshold. An obvious test that could show additional mitigation opportunities. The appropriate mitigation **is** presented at **250 ft**

additional suggestions; ground cover surrounding ponds and constructing buildings so that entrances and ventilation ports face away from nearby dwellings (?)

Combined Project Effects- pages 5.10-10,11,12 and tables 5.10-3,4

The dedication of several pages to "Combined project effects" in project 1 (traffic Noise contours) Yet the subject does not come up in any of the 3 other projects.

How many trips per day does a gravity sewer that is this spread out require? pump and back up generator inspections how often?

If step stag tanks require pumping every 10 years then 450 truck entries per year expected (would be similar to existing septic tank pumping impact)

Additional-reworking Broaderson every few years-regrading the leachfield- no impact stated

STEP/STEG effluent is described as "Raw wastewater"

Page 16-15 CY excavated export material would not require **3** truckloads per residence and if it did, the 7200 trips total is wrong (10 cubic yards per load assumption)No real effects or mitigations described

Table 510-5 Collection is ~4500 residences- conveyance is a much smaller number but not addressed- held to be equal though affects less people

"Several Individuals had communicated these concerns within the TAC. Anne Normant is actually quoted in DEIR regarding noise. Dr. Dubbink had raised concerns within TAC.

REGULATORY ENVIRONMENT

Due to time limitations, this section cannot be developed the following comments are pasted from a communication to the Central Coast Board regarding : “RS-2009-0012 amending the Basin Plan to adopt a conditional waiver as an onsite wastewater system implementation program...”

Comments relating to Los Osos were part of a larger letter relating to policies as a whole

“Waiver comments continue after this section.

Technical note- the section below is not amended as part of the waiver but the following comments are relevant to a functioning basin plan.

Page 9

VIII.D.2.e. ONSITE SYSTEM MAINTENANCE

“RECOMMENDATIONS

- 1. Septic tanks should be inspected every two to five years to determine the need for pumping.*
- 2. Septic tanks should be pumped whenever: (1)the scum layer is within three inches of the outlet device, (2) the sludge level is within eight inches of the bottom of the outlet device, or (3) every 5 years; whichever is sooner. EPA*
- 3. Drainfields should be alternated when drainfield inspection pipes reveal a high water level or every six months, whichever is sooner.”*

Discussion:

1. A reasonable recommendation that could be a “should” if managed properly, and have reporting requirements. New alternate systems could require inspections after 2 years of first installation and five years thereafter. Older tanks could be inspected every 2 years and scheduled to five thereafter if 2 successive 2 year inspections show stable capacity. First 2 years following a functional failing etc...
2. The section causes the most problems. **The point of an inspection is to ascertain if pumping is necessary. There is no reason to assume that with adequate inspection, a modern Septic tank that is properly maintained and sized (leach pit included) can go unpumped for 20 years or so.** Older tanks, provided they are intact (and that can be tested) may require more frequent testing. **Currently a system considered for installation in Los Osos is assumed to require 5 year pumping intervals for brand new high capacity modern tanks. Elsewhere in the counties, this is mostly un-enforced.**
3. Unlikely that this is happening much, the level of implementation should be evaluated by the waterboard for increased implementation or an implementable schedule should be adopted. It is unlikely that a regulation that alters pumping schedules could be found to not have an impact in the 2009 Air quality, Carbon and Global warming gasses, regulatory environment, or the physical environments in which the waters of California flow.

Edit suggestion: page 3 column 2 paragraph 2 *“failing systems to be brought into compliance with (the) Basin Plan... or (with) repair criteria consistent with locally implemented”* suggest inserting “The” and “With”. Additionally “failing systems” has been used in a regulatory meaning (as in failing systems in the Los Osos prohibition zone, indicating that they are all failing, irrespective of individual condition) page 2 of RS-2009-0012 includes a definition of “failing” that is functional. It should be made clear that it is failure of function that is to be addressed.

“General Discussion

The housing bubble burst and financial crisis are affecting the abilities of the governing jurisdictions to comply with a large number of new regulations. Local governments are feeling the loss of tax revenue and are responding by reducing staff. The very people that partnered with the water board staff in producing the current Memoranda of understanding may not be available for this round of changes. Other regulatory government agencies

(coastal commission for example) are reporting losses of planning positions and other essential staff. Global warming and weather change will ensure that 100 year flood events will take place every 50 years. This is a new era unanticipated in the plans that are now just being implemented. There have been encouraging signs in the Central Coast Waterboard in recognizing that the Governing Jurisdictions are partners in compliance rather than polluters to be enforced on. The economic burden of regulation must continue to be recognized. Actual conditions, recognized by local authorities, by valid scientific means must be prioritized. I hope these streamlining trends continue.
Alon Perlman”

DEIR FINAL DISCUSSION AND SUMMATION

The Fatal Flaw

Though it is appropriate to use questions, this reviewer is not able to avoid stating that (and as presented to the SLO counties supervisors) applying secondary treated wastes (liquid or solid) to agricultural lands or, to replenish a reliable thousands of year old aquifer and a still mostly intact sand filter that created the aquifer, will not work.

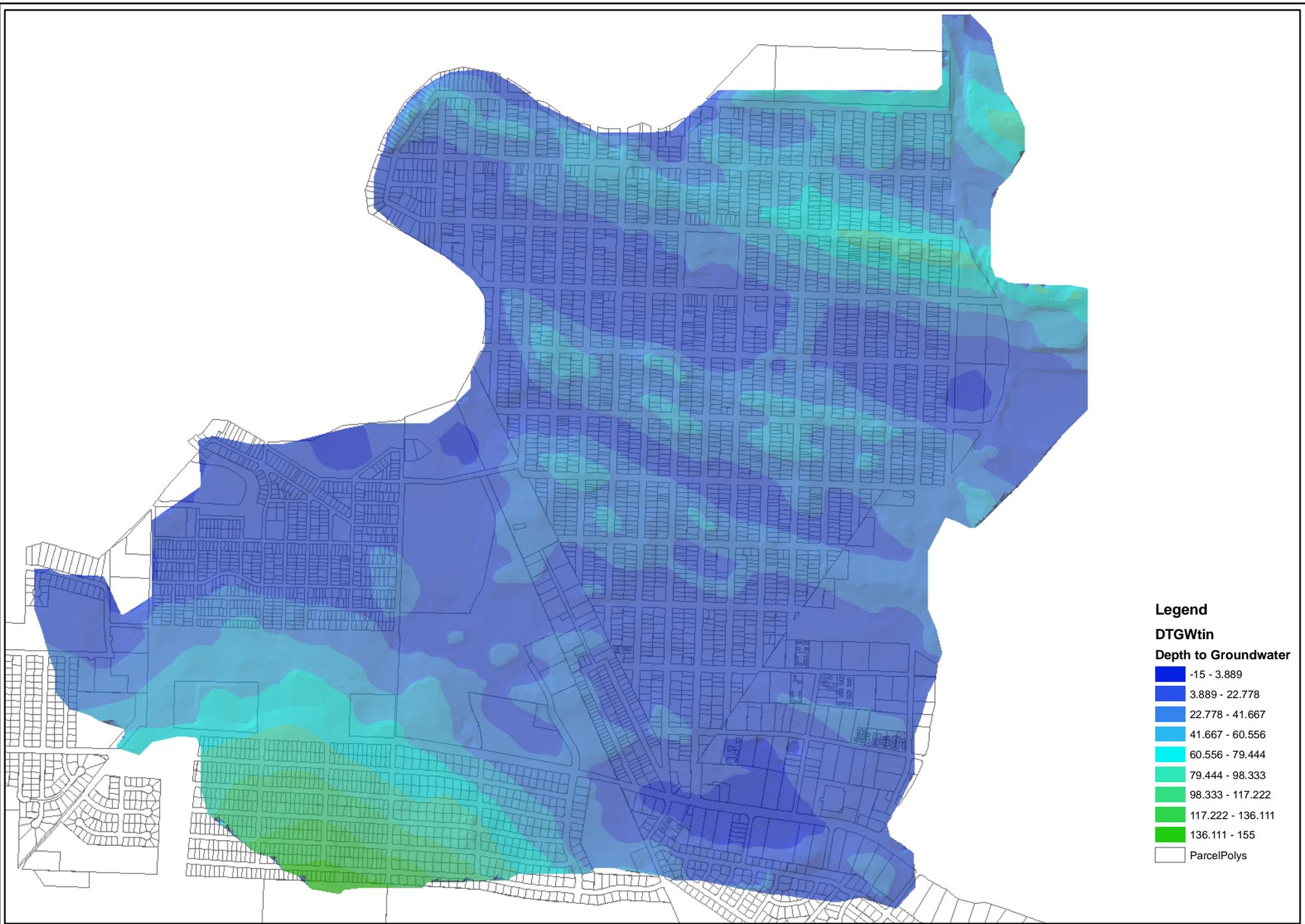
The county needs to obtain guidance from it's own EIR Document. This need is hampered, by this disparity between what the EIR is stating (secondary treatment), and what will more than likely happen, after more delays (Tertiary treatment).



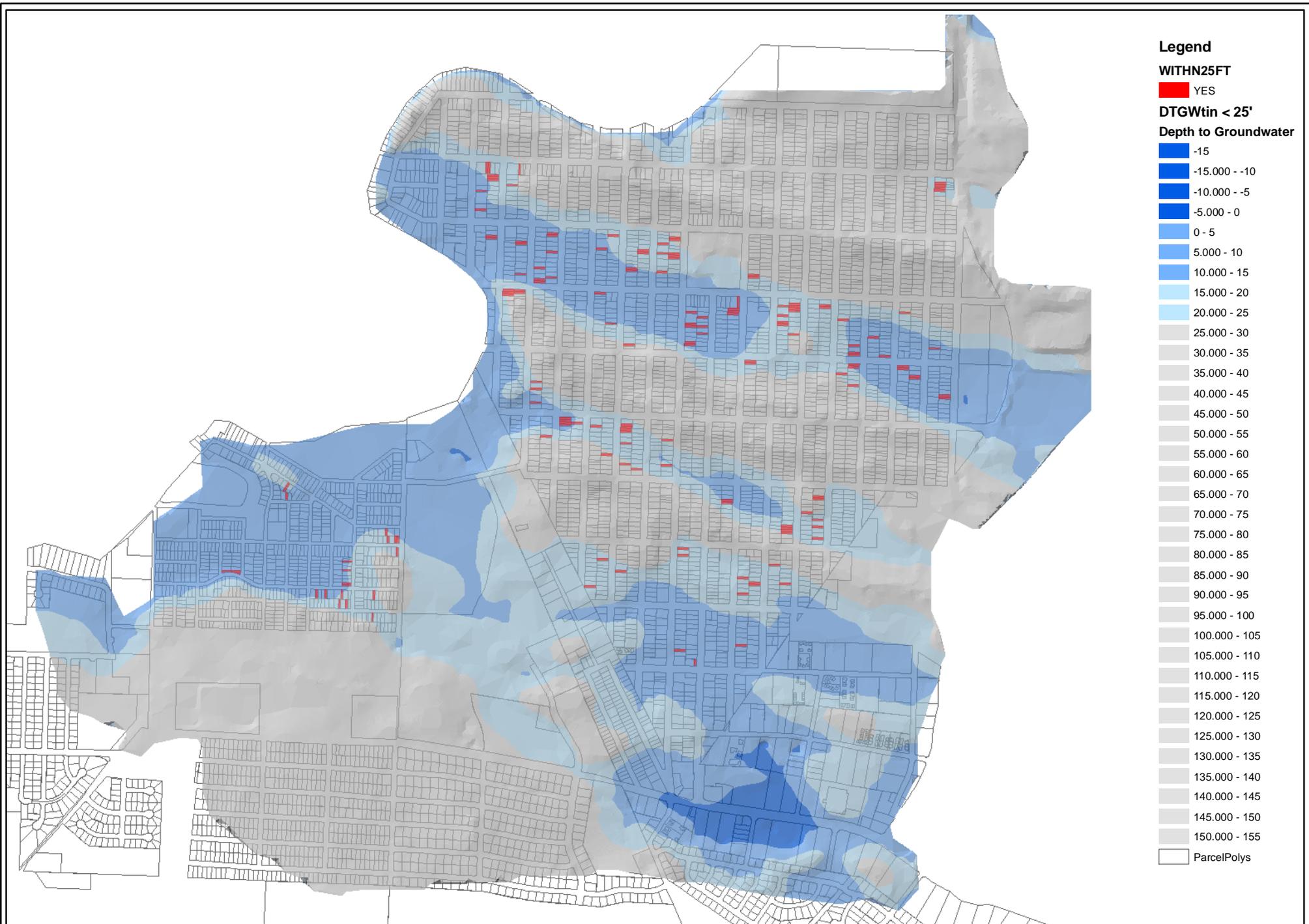
T.

A

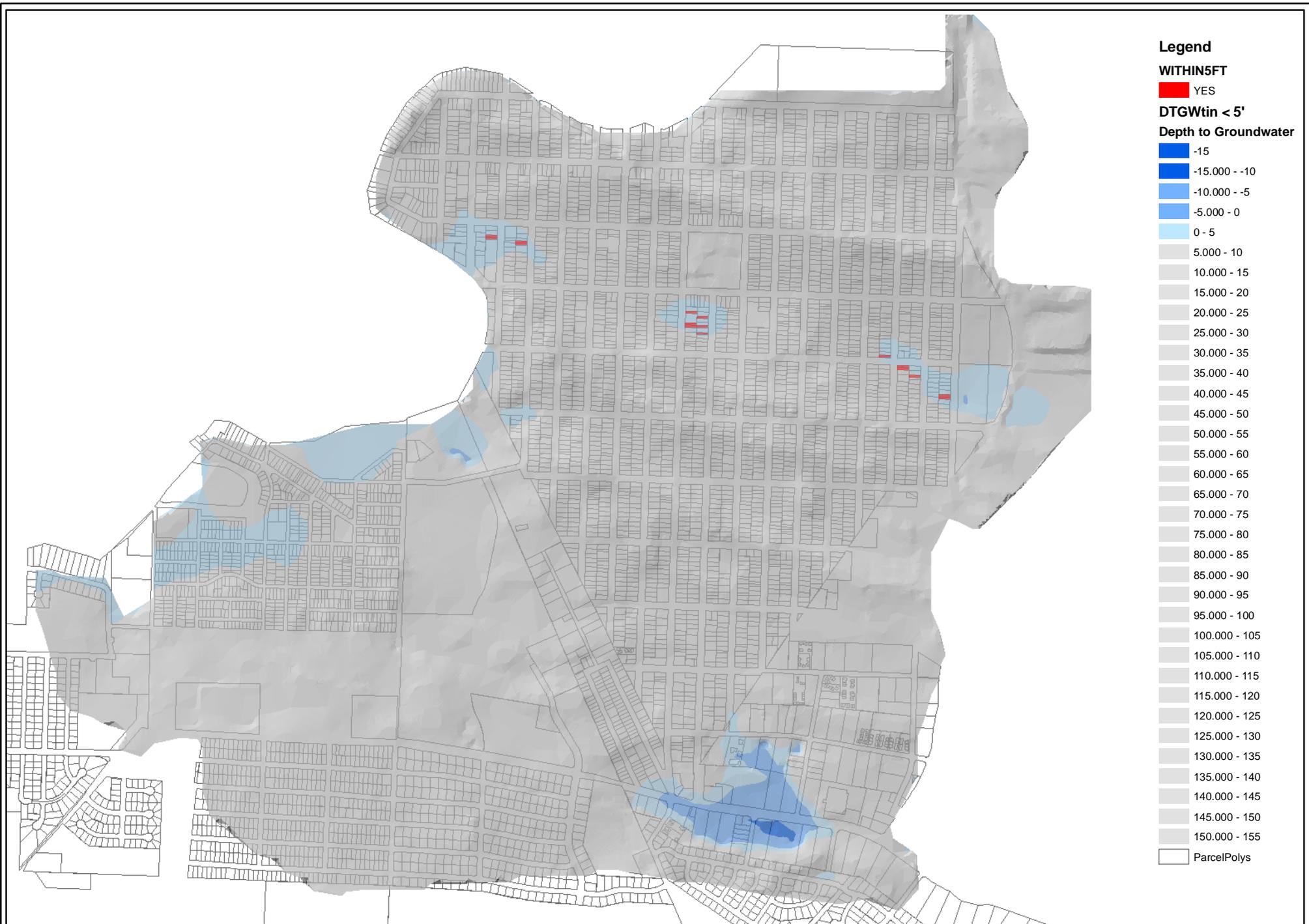
R.



Depth to Groundwater Surface Model



Parcels < 3150 Sq. Ft. and < 25 Ft to Ground Water



Parcels < 3150 Sq. Ft. and < 5 Ft to Ground Water

NOTE: The nitrate as nitrogen concentration contours on this map are based on monitoring well data that do not necessarily represent first water. The areas of high ground water are displayed for reference only and it should not be assumed that the water quality data and contours in such areas represent first water.

Base map: USGS Topo, Morro Bay South
Map Scale: 1 inch = 1,000 feet

-  Network monitoring location
-  Inferred NO3-N concentration contour (mg/l)
-  10 NO3-N concentration (mg/l)




1000 feet

Figure 2
NO3-N Concentrations (mg/l)
LOCSO Monitoring Network
October 2005 - Revised*
Los Osos CSD

Cleath & Associates
* Sample 7L3 revised from 52 mg/l to 18 mg/l NO3-N based on resample collected January 2006

Depth To Groundwater (Feet)



< 5



