To: Mark Hutchinson 1/30/09
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From: Lawson Schaller
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Mr. Hutchinson and others:

Please see my comments below regarding the DEIR on the LOWWP.

I appreciate the progress the County has made to date on the LOWWP and look forward to a completed project. I also appreciate the opportunity to make comment on the DEIR.

As a homeowner who (like others) has committed $25,000 or more to the LOWWP I have concerns over the thoroughness and proper analysis within the DEIR. I want the best value for our community while protecting our aquifer and the National Estuary. In order to assure the best value we need current objective information in which to base the final analysis. It is my opinion that the DEIR needs more work. More analysis and review is needed and corresponding re-calculations need to be completed. This updated information in the DEIR needs to be re-published for further public review and more comment.

Agricultural Exchange/Reuse

The DEIR suggests that an agricultural reuse/exchange program may take up to 20 years to establish. The time frame stated in the DEIR is inconsistent with information from professionals in the field. The DEIR needs to include current objective factual information from successful programs using recycled water for agricultural use. The County has requested that comments be based on fact, reasonable assumptions based upon fact, or expert opinions.

The DEIR consultants need to contact professionals in the field and correct/update the data in the DEIR and re analyze the use of recycled water on agricultural land and its potential environmental impacts.

It is realistic to implement recycled water for agricultural use so that it comes on line simultaneously with the completion of the LOWWP. Recycled water use on agricultural land is a widely accepted and established practice.

In speaking with water recycling expert Dr. Bahman Shiekh, and others about agricultural reuse, I was informed of some facts, gathered expert opinions, and made reasonable assumptions based on fact. I have summarized them here.

Other counties have recycled water programs for agricultural use. Monterey County has approximately 12,000 acres of agricultural land currently using recycled water from local waste water treatment facilities in Marina. This has been a successful ongoing program for 12 years, with 95% of the farmers within the recycled service area voluntarily accepting and using the recycled water. Orange County has had a successful program for approximately 30 years, with recycled water produced by Irvine Ranch Water District used for growing a variety of vegetable crops. Santa Rosa and Watsonville are implementing water recycling programs for irrigation of agricultural land. This is an established practice by the farming community and recycled water is commonly used by certified organic farmers. Agricultural irrigation using recycled water is widely accepted by farmers now. It is proven, successful, reliable and sustainable.

In Dr. Shiekh's expert opinion, it is reasonable to assume based on fact, that farmers in the Los Osos Valley could be accepting recycled water soon after, if not immediately after the LOWWP is complete and producing recycled water; an approximate time line of 1.5 to 2 years-during the construction period. This time frame is in stark contrast to the DEIR assumption. Dr. Shiekh acknowledged the time necessary and the need to negotiate prices and other details in order to bring the farmers to an agreement (letter of intent or contract) for accepting the recycled water. He also pointed out the need to have tertiary treatment so as to permit unrestricted irrigation use of the recycled water.

Several prominent farmers from Los Osos have gone to Monterey County to see the recycled water program and speak first hand to farmers that are using recycled water. Several Los Osos farmers expressed interest in using recycled water from the LOWWP. I have personally spoken to a Los Osos grower who expressed interest in using recycled water for the LOWWP. His concerns were price and whether or not the water would be delivered under pressure. The interest is there.

In recent conversations with Los Osos farmers Dr. Shiekh and his colleagues were told that the farmers' wells were producing less water each year and they reiterated their interest in having a reliable, drought resistant, recycled water source. Dr. Shiekh expressed and emphasized the view that Los Osos may be missing a valuable opportunity to use recycled water (with inherent beneficial nutrients), reduce pumping demand on our potable ground water, and alleviate salt water intrusion. In essence we have an opportunity to balance and protect our basin by using recycled water beneficially on the basin.

It is reasonable to assume that by spraying/disposing of recycled water on the Tonini spray fields there is a potential negative environmental impact on the Los Osos aquifers. The DEIR should provide further evaluation and/or a re-analysis of the assumptions that the DEIR used to suggest a twenty year implementation schedule for ag reuse. There is also justification to request further analysis regarding the potential of a positive environmental impact on the Los Osos aquifer with the immediate implementation of an ag reuse program.

I also spoke with Bob Holden, Principal Engineer, Monterey Regional Water Pollution Control Agency. Mr. Holden was directly involved in managing, overseeing the recycled water program at MRWPCA, he is still very involved in the program. Mr. Holden informed me that farmers/growers in his area are currently on a waiting list to use the recycled water for agricultural use. The recycled water with its high quality, beneficial nutrients, and reliable drought resistant supply is highly sought after. Mr. Holden explained that farmers and growers from Oregon to Southern California (as well as from around the world) have toured their facility and the nearby farms that use the recycled water for irrigation. Mr. Holden went on to say that the visiting farmers (including those from Los Osos) were positively impressed with the use of recycled water and it was well received. In his professional opinion bringing new farmers into agreement and using recycled water would likely take 1 to 2 years. Again, this is in stark contrast to the DEIR time line of 20 years. Mr. Holden explained that he met with growers in Santa Barbara County to assist them in the use of recycled water for ag use; recycled water is being used by growers in Los Angeles County; Oxnard is implementing a recycled water program for agricultural use.

I also spoke with Mark Moya with the Laguna County Sanitation District which operates with in Santa Barbara County in the Orcutt Area. Mr. Moya explained that they are using recycled water on agricultural land and also on pasture land for cattle feed. This is a successful program.

All of the field professional's I have spoken with expressed some level of surprise or questioned the logic of using highly valuable water on grass in spray fields only to cut and haul the grass to the land field.

In this era of drought and over pumping of ground water we must give strong consideration to using recycled water for agricultural irrigation. To not do so falls outside of the common accepted practice of using recycled water for agricultural use. Many counties and cities are currently using or implementing programs to use recycled water for agricultural use.

The DEIR should provide broader and deeper analysis in regard to the potential significant negative environmental impact of not using recycled water on ag land. Per the DEIR page 5.2-5, section 5.2.3a-b, "…according to CEQA Guidelines…would the project: substantially deplete…or otherwise substantially degrade water quality".

Spray Fields

The Tonini spray fields, as stated in the DEIR, are a disposal option. The operative word is disposal, as opposed to reuse. This water is far too valuable of a resource to dispose of outside the basin without some mitigation value. Based on the aforementioned comments from professionals in the recycled water industry, it is clear that the use of recycled water on viable economic agricultural land has distinct advantages. The DEIR should include thorough analysis of the environmental impacts on water quality, air quality, traffic impacts, land fill capacity and other factors associated with the spraying of effluent and cutting of grass several times a year and hauling it to the landfill.

Water Conservation

Per the DEIR page 5.2-5, section 5.2.3a-b, "…according to CEQA Guidelines…would the project: substantially deplete…or otherwise substantially degrade water quality". It is important to note that not implementing thorough water conservation may result in substantial depletion or degradation of water quality, a significant environmental impact.

Conservation goals stated in the DEIR are 10% by 2020. California Assembly Bill 49 has a goal of 20% by 2020. Implementing intensive conservation, immediately after the county accepts the project is critical. The DEIR states (p.2-13)…"proposed projects *may* include the proposed water conservation measures, which mandate that property owners retrofit… with low flow fixtures…prior to hooking up to the sewer." In this section "*may* include" should be changed to "*must* include…" If '*may'*, turns out to be '*may not*', then not mandating water conservation will result in significant negative environmental impacts to water quality. It is widely accepted among experts and many studies show tremendous water savings and positive environmental impacts by implementing high efficiency fixtures.

The DEIR cannot accurately estimate or predict water conservation without reliable data showing current conservation measures in Los Osos (ie percentage of homes with low flow toilets etc). The DEIR should include a survey establishing the necessary baseline data needed to accurately establish and forecast conservation goals and the likely impacts on the environment. Without baseline data, it seems the current DEIR cannot come to an accurate conclusion, without making broad (perhaps incorrect) assumptions, concerning environmental impacts in respect to a conservation plan. The DEIR should include further analysis on conservation and its potential environmental impacts (such as increased salt water intrusion that depletes and degrades the aquifer). The DEIR does not specify how it will measure and determine if conservation efforts are effective in reducing salt water intrusion. The DEIR should include detailed information on how the LOWWP will measure the effectiveness of its conservation efforts as it relates to salt water intrusion.

Additionally, there is great concern and some confusion in the community as to why the county is establishing a low goal of 10% by 2020, as well as delaying other action steps.

There appears to be a response from the County that the priority is to build the LOWWP with minimal costs initially. And then as time allows more conservation, ag exchange, and a higher level of treatment could be pursued; in my interpretation the County is suggesting that the costs of these delayed steps and upgrades could then be distributed across the entire basin, including purveyors, as opposed to only the Prohibition Zone shouldering these costs. If this is an accurate perspective as to why the county is delaying some of these measures then I suggest the county produce a parallel or supplemental document that explains its intentions in regard to long term planning. This would likely alleviate many concerns and criticisms. However concerns will remain that by delaying certain measures, steps or upgrades to the LOWWP, the County runs the risk that these critical upgrades may not happen due to political issues (ie 218 vote), budget/cost concerns, community acceptance, regulatory changes etc.

Gray Water

The DEIR does not properly analyze gray water use. Gray water use has the potential to reduce potable water pumping demand and also provide a recharge element for the aquifer. Use of gray water reduces the flows of waste water to the treatment site. The DEIR should provide analysis and evaluation of gray water use and its potential environmental impact.

Low Impact Development Technologies (LID)

The DEIR does not properly analyze the positive environmental impacts as it relates to implementing LID. During the installation of the collection system large areas of impervious surfaces will be removed and/or disrupted. Some parts of the impervious surfaces could be replaced with pervious paving-surfacing options that would mitigate/manage storm water and allow it to percolate and recharge the Los Osos basin. The City of Seattle has obtained large grants (offsetting costs) specifically for using LID strategies (bio retention, bio swales) in conjunction with the installation of the collection system. The Central Coast LID Center (in SLO) has had success implementing this type of strategy.

Storm water is a growing area of concern with regulatory agencies and environmental groups. The County has a valuable opportunity in working with other departments and agencies addressing storm water management with LID strategies in conjunction with the LOWWP.

The use of abandoned septic tanks for rain water catchment provides opportunity to reduce storm water runoff and basin recharge. Gutters can be directed to the abandoned septic tank. Rain water can then flow passively to the existing leach field and recharge the basin. The rain water could also be pumped from the septic tank for onsite landscaping irrigation.

These are a few LID examples that the DEIR has not fully considered and analyzed. The DEIR should provide the analysis and evaluation of LID in regards to its potential environmental impact on this project.

Collection systems

The DEIR repeatedly states that pumping of septic/interceptor tanks needs to take place every five years. The Counties tech memo suggests a pumping schedule of every 10 years. I have spoken with industry professionals, and Los Osos homeowners, and their experience supports the 10+ year interval as more accurate. The DEIR needs to recalculate the total costs and associated environmental impacts with a 10 year pumping schedule compared to a 5 year schedule. In addition the DEIR needs to provide analysis on pumping intervals on an 'as needed basis per inspections', which many professionals think may be the best method to determine the need for pumping. This was acknowledged at a 1/29/09 Los Osos CSD meeting by the district engineer. Homes will have vastly different waste flows in both quantity and quality (based on number of occupants, efficiency of fixtures, cleaning habits, etc.) and therefore will likely need different pumping schedules.

The DEIR lacks the data and proper analysis of placing individual tanks and/or cluster tanks in the public right of way. The county has large right of ways in Los Osos. Analysis should be included with the interceptor tanks off of private property. The option of cluster tanks in the right of way may also have a large influence on public perception and acceptance as it relates to the upcoming community survey. The DEIR should provide analysis of environmental impacts based on tank cluster modeling, and also on individual tanks in public right of way.

The DEIR lacks current I/I – exfiltration data on recently installed gravity collection systems. Older historical data shows excessive I/I rates, presumably due to clay pipe construction, this needs clarification. The DEIR should include modern material construction-installation I/I data for gravity collection. The DEIR appears to assume better performance with new materials but no recent specific data seems to supports this. The DEIR also lacks significant data on pump and pocket pump failures on installations near coastal waters. It lacks sufficient recent historical information and data relating to spills, cleanup costs, and fines in relation to pump failures; the DEIR should include this information and then recalculate costs and potential significant negative environmental impacts.

There is concern that some collection systems may not be compatible with intensive water conservation efforts. The DEIR should have data clearly showing that sufficient slope exists in the installation of gravity collection that accommodates current and future intensive conservation measures. This again emphasizes the need for a recent conservation survey (baseline data) in order to extrapolate future flows. Many gravity systems require regularly scheduled flushing in order to remove collected solids. The water used to remove collected solids can outweigh water saved through conservation. The DEIR should show complete analysis of the environmental impact due to the

continued prolonged maintenance and use of water to flush/remove collected solids in a collection system; specifically detailing the volumes of water needed on an ongoing annual basis, where it is pumped, and its impact on the aquifer(s).

The maintenance schedules, costs and electrical demands (kWh/af) of the collection systems and their environmental impacts need re-evaluation. There is conflicting data between the DEIR and other documents prepared by professional engineers. See Los Osos Wastewater Management Update by Ripley Pacific. Specifically see tech memo #8 (*and important to note this document has an engineer's stamp…not all documents have an engineer's stamp*), table 8.3 provides direct comparisons of gravity and step. Figure 8.1 is also of interest showing annual power requirements and costs. The DEIR should include thorough analysis and sound conclusive reasons as to why these discrepancies exist and why any reports or sections of reports have been dismissed or ignored.

Broderson Leach Field

The use of Broderson as a leach field has long been controversial. Expert opinions have been gathered, and conflicting opinions exist. Supporting documentation is on file with the County and the Los Osos CSD. The application rates on Broderson have been drastically reduced from the original calculated estimates to a point that the County is essentially suggesting a trial and error process to see what application rate Broderson can accept (this may turn out to be a very expensive experiment). Given the conflicting expert opinions and lack of broad consensus from the scientific community the DEIR should closely re-evaluate the safety and recharge effectiveness of the proposed Broderson leach field - its potential environmental impacts vs. potential benefit.

The DEIR suggests the leach field be ripped or disked every five to ten years for maintenance, rebuilding/reconditioning. The proposed leach field area does not appear to have been thoroughly tested with the application of treated effluent. Is there documented data that can show how often the leach field rebuilding may need to be done based upon extensive testing with treated effluent? It may need to be ripped or disked every two to three years. The DEIR needs to include data (using treated effluent) and analysis reflecting the total environmental impacts in relation to a more frequent ripping/rebuilding/reconditioning schedule of the proposed Broderson leach field.

Closing comment

Again, I thank the County for its progress to date and I appreciate the opportunity to comment on the DEIR. I look forward to complete responses from the County and its consultants addressing the community's comments and concerns. I also look forward to a completed best value LOWWP.