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MEMORANDUM

Date: June 29, 2009

From: Mark Hutchinson, Environmental Division Manager
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Via: Paavo Ogren, Director of Public Works

To: San Luis Obispo County Planning Commission

Subject: Response to Comments and Questions on the Los Osos Wastewater Project

Introduction

The purpose of this memorandum is to provide a written overview of responses to issues identified by the public and Planning Commissioners on the current Los Osos Wastewater Project. This memorandum does not address all public comments and questions from Commissioners; it is intended to be responsive to the Commission by augmenting the verbal explanations that are provided during Commission hearings and to help facilitate the decision-making process.

Project Description

The Project Description is the basis for the Environmental Impact Report (EIR) and the Coastal Development Permit (CDP) under consideration by the Commission. The California Environmental Quality Act (CEQA) requires the evaluation of a reasonable range of alternatives. The Project EIR goes further than required by CEQA and provides a co-equal analysis of alternatives, thereby enhancing decision maker flexibility.

Some of the comments on the EIR assert that the EIR is deficient for the lack of water management options. In many cases, we believe that these issues are actually not with the EIR but instead with the Project Description. The expansion of the wastewater project to include water resource facilities or programs is not

required under CEQA; the Project Description has been explicitly limited to community wastewater facilities that are necessary to comply with the mandate of the Central Coast Regional Water Quality Control Board (RWQCB). It is understood that the community of Los Osos has a significant water resource issue[1, i]; nevertheless, based on policies and strategies approved by the San Luis Obispo County Board of Supervisors (Board) over the past three years, the Project Description is solely for a wastewater project. We are hopeful that this memorandum will help explain the need for the project, why resolving resource issues in Los Osos begins with resolving the wastewater issue, and how the project will create the best foundation to also resolve water management issues.

The Need for the Project

Numerous reasons exist that support the need for the Project. The following discussion provides regulatory references and one of many court decisions that formally establishes and upholds the mandate. The foremost is the need to respond to the requirements of the Regional Water Quality Control Board. These requirements are embodied in two key project objectives listed in the EIR:

1. Develop a community wastewater project that will comply with RWQCB Waste Discharge Requirements. Address the issues of water quality defined by the Waste Discharge Requirements (WDR) for discharge limits issued by the RWQCB.

2. Groundwater Quality. Alleviate groundwater contamination - primarily nitrates - that has occurred at least partially because of the use of septic systems throughout the community.

The Water Quality Control Plan, Central Coast Region (Basin Plan), which is the governing document developed by the Regional Water Quality Control Board pursuant to its authority under the California Water Code, prohibits all wastewater discharges after November 1, 1988, from on-site disposal systems within the Los Osos/Baywood Park Prohibition Zone. Adopted as Resolution No. 83-13[ii], the Prohibition is set forth in Section VIII.D.3.i of the Basin Plan, page IV-64.

With the adoption of Assembly Bill 2701[iii] in 2006, the authority to address wastewater issues in Los Osos, and more specifically the development of a wastewater system, was removed from the purview of the LOCSD and, if accepted by the Board of Supervisors, transferred to the County. AB 2701 is the foundation of the County's current efforts to address the issues raised by the Regional Board.

[1] On March 27, 2007, the San Luis Obispo County Board of Supervisors adopted the Resource Capacity Study for the Los Osos water supply, declaring a Level III water resource constraint, which is the greatest level of concern under the County's Resource Management System.

Some members of the community continue to assail the Regional Board's findings regarding the use of septic systems in Los Osos; questioning whether or not septic systems are actually impacting water quality in terms of nitrate or other pollutants. The Regional Board is empowered to protect the waters of the State in the manner and approach that the regulatory agency believes will best address the issues. These same issues have been discussed at length by the Regional Board resulting in no change in that agency's orders. Consequently, the current project's objectives do not include efforts to overturn the actions or authority of the Regional Board.

With the approval of the County's Proposition 218 vote in 2007 property owners decided on this issue by authorizing the funding for a community wastewater project. In other words, property owners within the prohibition zone (with an 80%-yes / 20%-no ballot decision) overwhelmingly supported the County's efforts to develop the Project, which was defined as "services needed to satisfy the mandate by the…[RWQCB] through Resolution 83-13."

Consistent with the Project description, the Project EIR, and the CDP application, the Proposition 218 ballots described a wastewater project and <u>not</u> water management projects or programs. While some individuals continue to assert that the County must expand the Project to include water management projects or programs, that decision has already been made by the Board and authorized by property owners.

This issue has also already been subject to litigation. One of the noteworthy cases involves a suit against the Los Osos Community Services District while it was attempting to implement a wastewater project. The litigation was unsuccessful. The following language from the United States Court of Appeals for the Ninth Circuit, although stern, is noteworthy:[2, iv]

> "It does not shock the conscience for government to make a decision that certain areas and not others require new sewage facilities. It does not shock the conscience that a local government might rely on a regional water quality control board to draw a Prohibition Zone that does not affect everyone within the local government boundary, based on the governing body's perceptions of needs. This is so even if those within the Prohibition Zone assert that they cannot afford the assessments and will be forced to sell their property and move elsewhere."

Therefore, the need for the wastewater project is clear and undeniable. It is necessary to comply with regulatory mandates. It is necessary to protect the environment of a National Estuary and State Marine Reserve[v]. It is necessary to

[2] This case is "not for publication" which means that it cannot be cited for other litigation. It's inclusion for this report is to simply inform the Commission on a judicial decision that resulted from a challenge concerning the wastewater mandate.

stop groundwater contamination and protect the health and safety of the community. It is a necessary step in solving the water supply issues in the community and it is necessary to move the community of Los Osos forward and to resolve a conflict that has gone on far too long. As a result, the County of San Luis Obispo responded positively to Assemblyman Sam Blakeslee when he became involved in leading the development of State legislation (Assembly Bill 2701) as a platform to solve a local problem.

After AB 2701 was adopted, the County initiated its efforts in 2007 with a focus on the requirements of a Proposition 218 for a *wastewater project.* An engineering evaluation of viable project alternatives was developed through a rough screening and a fine screening reporting process that provided the "basis of evidence" for the Proposition 218 assessment engineers report. The engineering evaluations also provided clear direction on how the County was undertaking the wastewater efforts so that the community would have a good sense of the County approach and process, and the general range of project alternatives under consideration by the County prior to the Proposition 218 vote.

From these initial Project efforts required for Proposition 218, the County was clear that the wastewater efforts would not include water resource projects or programs. Some in the public have characterized the County's process, from the beginning, as a County attempt to "de-couple" wastewater and water needs. Stated differently, the County has from the beginning been very clear that approaching solutions to the wastewater project would not be dependent on concurrently solving the community's complex water resource problems. Nevertheless, the County's approach to solving the long-standing wastewater dilemma does seek to maximize opportunities to help the water purveyors develop solutions to their over-pumping of the groundwater basin.

Project Issues and Alternatives

From the perspective of the Project team, the development of the Project included issues of greater significance and issues of lesser significance. We recognize that multiple valid perspectives exist with complex and controversial projects and the following discussion does not intend to diminish the perspective of others. Instead, it is intended to provide clarity on the Project team efforts.

Project efforts included research on prior efforts, the issues that led to the recall of members of the LOCSD Board of Directors, the LOCSD Board's decision in 2005 to halt the project that was under construction and the intent of Measure "B" (despite its technical inapplicability). The disposal requirements became a point of particular focus because the LOCSD scheme was not possible for the County to implement, and it was perhaps the greatest risk of litigation if the County repeated the LOCSD disposal plan. The treatment plant location is seemingly the single greatest source of challenge for community acceptance and social feasibility. Treatment technologies also include some significant ongoing

concern, but interestingly, not with respect to the technologies themselves but instead with respect to the underlying issues of sludge and treatment viability.

Disposal Requirements

The LOCSD plan included harvest wells based on the assumption that they would dispose of 100% of the treated wastewater effluent on land overlying the urban area of the groundwater basin. The harvest wells were identified as a necessary component of the wastewater infrastructure because the LOCSD acknowledged that their disposal plan would cause changes in the subsurface groundwater levels that would necessitate pumping of groundwater.

Recognizing the challenge of their disposal plan, the LOCSD proposed to discharge the harvest well water to Morro Bay, but that proposal was withdrawn in response to concerns raised by the California Coastal Commission.[vi] Instead, the LOCSD documented plans to circulate the harvest well water through their wastewater treatment facilities despite their consulting engineer's expressed concerns regarding this strategy.[vii] Lastly, they expressed intent that, ultimately, the harvest well water would be used for drinking water purposes[viii] even though neither the EIR nor the CDP included a dual purpose Project description. Coastal Commission correspondence indicates that they would reconsider a discharge of harvest water to Morro Bay as a "separate project" if necessary,[ix] and in our opinion, illustrated that both the LOCSD and the Coastal staff recognized that the LOCSD disposal plan had a clear degree of uncertainty. That uncertainty, in our opinion, created the logical need for the LOCSD consulting engineer to document their concern for the uncertainty over the approach, and other resulting correspondence ensued.

While the LOCSD approach had uncertainty for them, it is fully infeasible for the County. The water purveying authority of the LOCSD did not transfer to the County with AB 2701; therefore the County does not have the ability to utilize the harvest well water for drinking water purposes. In addressing concerns expressed by those that desire to see an option under the County Project to mirror the LOCSD's intent – i.e. that all of the treated effluent is disposed over the urban portion, it should also be recognized that the LOCSD plan was litigated by Golden State Water (GSW). Although GSW was unsuccessful in that litigation, that litigation was against the RWQCB and the results of that case do not prevent GSW from filing litigation against the County EIR if the Project repeated that questionable approach. Instead, the County evaluated and supports utilizing the favorable features of the LOCSD disposal plan, and improving upon it through strategies of integrated water resource management (IRWM)[3, x], which are now recognized as the primary strategies for water supply sustainability in California.

[3] The Los Osos Wastewater Project, which considers urban, agricultural and environmental water needs, is the highest priority project in the San Luis County Integrated Regional Water Management Plan. IRWM information can also be viewed at the State Water Board and the Department of Water Resources websites.

Broderson

Disposal at Broderson or in the near vicinity has been part of every wastewater project proposal for Los Osos. The site's location overlying the urban portion of the groundwater basin provides one aspect of IRWM strategies. Nevertheless, concerns do exist.

The physical nature of the groundwater basin under the urban area restricts the ability of water to percolate to deeper strata and can create changes to groundwater levels in the upper strata that must be monitored to avoid inappropriate changes. Inherently, the science of estimating changes in groundwater conditions includes uncertainty, and monitoring wells provide empirical evidence of actual changing conditions, as well as the basis to update groundwater models. With the recognized uncertainties of science, the County's proposed use of Broderson reduces disposal rates (compared to prior project proposals) that are nevertheless based on the best known information and evaluations, and at rates indicating that harvest wells would not be necessary. In essence, the proposed use of Broderson maximizes its benefits while mitigating its risks. The proposed use would hopefully also address the concerns of GSW as previously litigated under the more aggressive assumptions of the LOCSD. To that point, the California Department of Public Health's comment letter on the draft EIR[xi] clearly stated the following:

> "…we would recommend to the RWQCB that the Broderson site be considered a disposal project"."

As a disposal site, the use of Broderson avoids the additional complexities of the California Department of Public Health's recharge regulations,[xii] such as those that would require reverse-osmosis treatment technologies, the production of salt-laden brine, and the infeasible requirements that would be associated with brine disposal. While those higher treatment technologies (higher than tertiary treatment) may be desired in the future, they would be pursued with the community water purveyors and are speculative at this time.

Tonini

Irrigation at the Tonini property provides the dual disposal method that establishes reasonable certainty that the Project can adequately meet disposal requirements at all times. In many coastal communities, ocean outfalls provide the disposal assurances. For inland areas, river and creek discharges have a long history in California although this approach is clearly infeasible for Los Osos due to the increased regulatory and biological issues that have developed since the adoption of the Clean Water Act.

The Project EIR takes the conservative approach and assumes that utilizing Tonini for irrigation of treated effluent will create long term impacts on agricultural

lands, the Project's greatest impact. Concerns have been expressed over the application rate at Tonini, and the ability of the Project to irrigate at agronomic rates. The rates of application at Tonini may be reduced if the Broderson site, through monitoring efforts, proves to be able to handle higher disposal rates. Similarly, if the water purveyors manage the groundwater basin by pumping less from the deeper aquifer and more from the upper aquifer, the Tonini site might be utilized less because Broderson may be able to be utilized to a greater degree. Nevertheless, for purposes of the EIR and CDP, the application rates at Tonini must be conservatively based to assess potential "worst case" impacts.

The Tonini component also creates some of the greatest opportunities for IRWM. Comparable cases in nearby counties in California include those taken between water and wastewater authorities in Scotts Valley (Santa Cruz County) by the Scotts Valley Water District/City of Scotts Valley[xiii] and in Castroville (Monterey County) by the Monterey County Water Resources Agency/Monterey Regional Water Pollution Control Agency.[xiv] In both cases, the water purveyor partnered with the wastewater authority to use tertiary treated effluent for beneficial water resource management purposes. This cooperative model supports the sustainability strategies of IRWM and the State Water Board's Recycled Water Policy.[xv] In Petaluma (Sonoma County), while wastewater and water authorities are both within that City's powers, they also have a dual disposal system utilizing 800 acres of agricultural land irrigated with secondary treated wastewater during summer months.[xvi] In all of these cases, however, 50% of treated effluent is discharged to surface water bodies with no water resources benefits.

For Los Osos, the infrastructure between the Broderson site and the Tonini site provides the greatest flexibility for future water resource efforts. With the Commission's action to require tertiary treatment for the Project, that opportunity is enhanced, but still not certain. The quantities available for agriculture, the outcomes of the existing groundwater litigation, the required contractual arrangements, determinations of program details, and other issues create speculation on how such a program might develop. Nevertheless, from a policy statement, the Project condition #97 supports agricultural use but recognizes that the speculative nature of the groundwater litigation renders detailed program development infeasible as a requirement of the Project, and instead supports those efforts as independent and concurrent.

Other Disposal Options

Several other options have been proposed as elements by individuals who believe that they should be incorporated as requirements of the Project. Overall, it seems that individuals are hoping that the development of an array of disposal methods can render Tonini unnecessary. Comments on this point are generally speculative and made with the hope that "there must be a better way." Referring back to the LCP definition of feasible, the Project team struggles with the lack of clarity from those who comment, and while recognizing that some other

purported options have certain desirable goals, the additional studies, potential environmental impacts, negligible IRWM benefits, project delays, and infeasible cost considerations do not support conditions requiring that they are included in the Project's initial design and start-up. In addition, the Scotts Valley, Monterey and Petaluma examples all illustrate that effective water management strategies still require guaranteed disposal options. For Los Osos, the RWQCB also expressed this concern in their comments on the Ripley Wastewater Management Plan Update prepared for the LOCSD.[xvii]

A Phased Approach to Disposal

Proposed condition #86 was developed to ensure that long-term water supply needs are met before the wastewater project supports new development in the community. Inherent in this condition is the need to establish long-term disposal plans that will also support build-out of the community. To clarify this point, the Commission may wish to modify condition #86 to explicitly include the development of a long-term effluent disposal/reuse plan that will support build-out of the community prior to allowing new development. This would clarify that the reuse and disposal options currently proposed are intended to support the project at startup, allowing water reuse programs to mature before higher wastewater flows are generated.

Treatment Plant Location

The Project Description proposes that the location of the treatment facilities is also at Tonini. This site was identified during the development of the EIR and required the issuance of the Supplemental Notice of Preparation (SNOP). During the development of the EIR, the co-location benefits of Tonini were recognized. In other words, since the site is large enough for both irrigation disposal and the treatment facilities, cost savings by avoiding acquisition of multiple properties help address affordability issues and the cost of the Project and the impact to disadvantaged persons within the community. Even so, the EIR provides a co-equal analysis of the Giacomazzi property, and an evaluation of other alternatives as required by CEQA.

Mid Town

Prior to the current Tonini recommendation, the Mid-Town (referred to as Tri-W) site was developed by the LOCSD. Subsequent County project strategies were adopted by the Board in June 2006 to consider other treatment locations besides Mid-Town. The Project team, given the clear social infeasibility issue associated with Mid Town and the infeasible status of the LOCSD disposal plan, believes that if either of those options are deemed by decision-makers to be the best solution for Los Osos, then serious consideration should be given by the Board to adopt a due diligence resolution and not pursue Project implementation. In other words, if decision makers collectively decide, through perhaps a denial of the

current CDP application, that the Tri-W project should be implemented, then the Board will have a challenging decision to make. It may wish to consider turning the wastewater project back to the LOCSD to implement. This perspective is valid from the standpoint that the Tri-W project was the LOCSD's project, not the County's project, and if it is to be developed, then arguably the LOCSD should develop it. Alternatively, the Board would need to consider directing the County team to implement the Tri-W Project – contrary to the community wide survey that only provided 10% support for the once-failed alternative.

Tonini and Giacomazzi

The co-equal CEQA analysis provides decision makers with the ability to approve the development of treatment facilities at either site. Giacomazzi will incur additional costs estimated at between $2 and $5 million due to additional land acquisition costs, additional access costs, and site constraints that would increase construction costs. We believe that the comparison of the two sites is relatively well known and discussed, and will limit our comments herein to reiterate that both sites are viable.

In contrast to Tonini and Giacomazzi, other sites such as the Gorby property were evaluated to a lesser extent in the EIR. Gorby, for example, has known earthquake faults, unstable soil conditions near Los Osos creek, an ongoing equine business, and correspondence from the owners indicating opposition. Acquisition of the property, even if the site problems did not exist, would require eminent domain based on the written opposition of existing owners. With other feasible locations for treatment facilities, the eminent domain standard of necessity may be difficult to obtain, would almost certainly require litigation, and the site would provide no obvious treatment plant or disposal benefits over either Giacomazzi or Tonini. Despite the statements by some that the treatment plant must be located over the groundwater basin, there is in fact no nexus between treatment plant location and the seawater intrusion currently occurring in the groundwater basin. The general proximity of the treatment facilities to disposal sites will help minimize costs, but nexus on location is inaccurate.

Treatment Plant Technology

Issues under consideration regarding treatment plant technology include site acreage requirements, greenhouse gases, sludge production, and energy requirements. Two options were co-equally evaluated in the EIR.

Extended aeration has been identified as environmentally superior based on the greenhouse gas analysis. Membrane bio-reactors, which were included in the LOCSD Project description, require less acreage and generally provide better quality effluent, but produce more sludge, require more energy, and are more expensive. The extended aeration technology, with tertiary facilities, can be sited on either Giacomazzi or Tonini.

Facultative Ponds typically have slightly higher greenhouse gas emissions due to the need to import a carbon source to meet treatment requirements expected from the RWQCB. The water quality of the treated effluent can vary and result in violations of waste discharge requirements; except that tertiary treatment facilities would mitigate the water quality concern of facultative ponds. Normally, sludge is less of an issue except in the 20 year frequency when the inert materials need to be removed. Due to the acreage requirements, facultative ponds can only be located at Tonini.

Other Project Issues

While the Project team generally believes that methods of disposal, the secondary Project objective of "mitigating the project's impacts on water supply and saltwater intrusion," and the treatment plant location are the more significant Project issues, others exist as well.

Collection System

A significant amount of comments and discussion has focused on the collection system related to the ability to maintain a watertight seal at the pipe joints. Current industry standards (ASTM D3212) require materials and installation practices which provide watertight, flexible joints. Recent industry studies have document the ability of gasketed PVC pipes with elastomeric seals to maintain performance over many years and in adverse conditions.[xviii, xix]

The focus on the collection system seals also raised the issue of potential infiltration of seawater into the collection system in the event of a major rise in global sea levels. The impact of sea level rise can vary based, in part, on topography and geology (for example tidal zones). Nevertheless, the relatively high levels of fresh groundwater in the upper aquifer are expected to remain, even after the collection of septic tank effluent, due to other urban influences and natural conditions. The groundwater levels at the bay will be at least a couple feet above sea level[xx] and sea level rise will result in a corresponding rise of the groundwater system near the bay to reach a new equilibrium at about the same elevation above the new sea level. Because of the density difference between fresh and salt water, there will be 40 feet of fresh water below sea level for every foot of fresh water head above sea level.[xxi] A review of the existing collection system design indicates that all of the pipes are located where the ground surface is above 5-foot elevation. These areas would not be inundated with ocean water and maintain fresh groundwater to depths below any buried pipes. Perhaps one exception is on Doris Avenue, near Lupine Street, where the road elevation above the pipe is approximately 8-foot elevation but low points on both sides of the road would be permanently inundated by a 5-foot sea level rise.

In response to the Commissions request from the May 28, 2009 hearing, maps have been provided as attachments to illustrate the following:

- Attachment "A" shows streets where, based on the existing LOCSD design, the gravity collection lines will be placed at depths greater than 13 feet.

- Attachment "B" shows streets where, based on the existing LOCSD design, the gravity collection lines are expected to be installed below existing groundwater levels and below 5-foot elevation.

Current standards for materials and installation practices provide for sealed joints with PVC sewer pipes. However, the combination of deep pipes and high ground water does raise constructability issues which could lead to a decrease in the quality of workmanship during construction if not properly managed and inspected. Additionally, the costs of future repairs in these areas, if needed, would be disproportionate to repairs elsewhere in the system. Public Works would support a condition for fusion welded pipes in such areas. Specifically, near the Lupine Pump Station where portions of the collection system pipes are more than 13 feet deep with high groundwater.

In other areas of the collection system that are in high groundwater, but not deep, more stringent construction inspection measures are warranted to ensure proper installation. The standard for construction oversight is for "observation" of the work, with close inspection provided on a random sample of the work. Additional verification of quality is provided by testing requirements. Public Works would support a condition that in areas of high groundwater <u>all</u> joints and pipe sections must be visually inspected for proper installation and joint integrity.

<u>Sustainability</u>

Many individuals have commented on sustainability. The balancing of water resource needs between urban, agricultural and environmental purposes is incorporated into the Project recommendations and conditions and, we believe, the cornerstone for promoting sustainability. Water conservation efforts are also incorporated into the Project and further sustainability goals.

<u>Contracting Environment</u>

A recent survey by the environmental engineering firm, Dudek,[xxii] illustrated that contract bids in California are an average of 34% below engineers' estimates in recent months. Proceeding with the Project in a timely manner is necessary to take advantage of the current contracting environment, and provides significant opportunities to help mitigate project affordability issues.

Grants and Finance

The County is continuing in the "pursuit of grants to mitigate affordability issues" as provided in AB 2701. The need for an approved Project is paramount. For individuals who believe it is important that the Los Osos wastewater project also include water management programs and projects, the Monterey County example is a good illustration of how multiple projects were able to obtain grants and financing from different sources over time.

Examples of grants which are currently being pursued include a $35 million Water Resources Development Act grant, a $10 million IRWM grant, and federal stimulus funds available for low interests loans and grants through the State Water Board and the U.S. Department of Agriculture.

Project Alternatives

The recommended approach:

- Extended Aeration at Tonini, with a gravity/hybrid collection system and disposal at Broderson and Tonini.

Public Works Supported Alternatives:

- Extended Aeration at Giacomazzi with a gravity/hybrid collection system and disposal at Broderson and Tonini.

- Facultative Ponds at Tonini with a gravity/hybrid collection system and disposal at Broderson and Tonini.

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References

Links to all references are available on the Project website at http://www.slocounty.ca.gov/PW/LOWWP/DOCS/Current_Documents.htm

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[i] Board of Supervisors Agenda, "Resource Capacity Study for Los Osos Water Supply" March 27, 2007

[ii] RWQCB, "Resolution 83-13" Sept. 16, 1983

[iii] California Assembly Bill 2701, Sept. 20, 2006

[iv] U.S. Ninth Circuit Court of Appeals, "Keller, Ulrich E., et al v. LOCSD" D.C. No. CV-01-05889-TJH, March 12, 2002, p. 4

[v] California Dept. of Fish and Game, www.dfg.ca.gov/MLPA/phase1.asp

[vi] California Coastal Commission Letter, "Subject: De Novo Review of Coastal Development Permit Application No. A-3-SLO-03-113…" May 27, 2004, p. 3

[vii] MWH Memorandum, "Subject: Los Osos Wastewater Project Disposition of Harvest Water" June 11, 2004, pp. 2-10

[viii] Ibid., p. 3

[ix] California Coastal Commission Staff Report, "Subject: A-3-SLO-03-113, Los Osos Wastewater Treatment Facility" July 29, 2004, p. 6

[x] IRWM websites:

County: http://www.slocountywater.org/site/Frequent Downloads/Integrated Regional Water Management Plan/index.htm

State Water Board: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/irwmgp/index.shtml

Ca. Dept. of Water Resources: http://www.grantsloans.water.ca.gov/grants/irwm/integregio.cfm

[xi] California Dept. of Public Health Letter, "Subject: Draft EIR County of SLO, Los Osos Wastewater Project" Jan. 23, 2009

[xii] California Dept. of Public Health, "Groundwater Recharge Reuse Draft Regulation" Aug. 5, 2008

[xiii] City of Scotts Valley/Scotts Valley Water District, "Reclaimed Water Supply Agreement" April 3, 1996

[xiv] RWQCB, "Order No. R3-2008-0008 Waste Discharge Requirements for the Monterey Regional Water Pollution Control Agency Regional Treatment Plant" Feb. 6, 2008

[xv] California State Water Resources Control Board, "Recycled Water Policy" Feb. 3, 2009

[xvi] RWQCB, "Order No. R2-2005-0058 Waste Discharge Requirements For City Of Petaluma Water Pollution Control Plant Sonoma County" Oct. 19, 2005

[xvii] RWQCB Letter, "Subject: Ripley Pacific Company's Draft Los Osos Wastewater Management Plan Update" Oct. 12, 2006, p. 5

[xviii] A. J. Whittle and J. Tennakoon, "Predicting the Residual Life of PVC Sewer Pipes" Plastics, Rubber and Composites, V.34, No. 7, Sept. 2005, pp 311-317

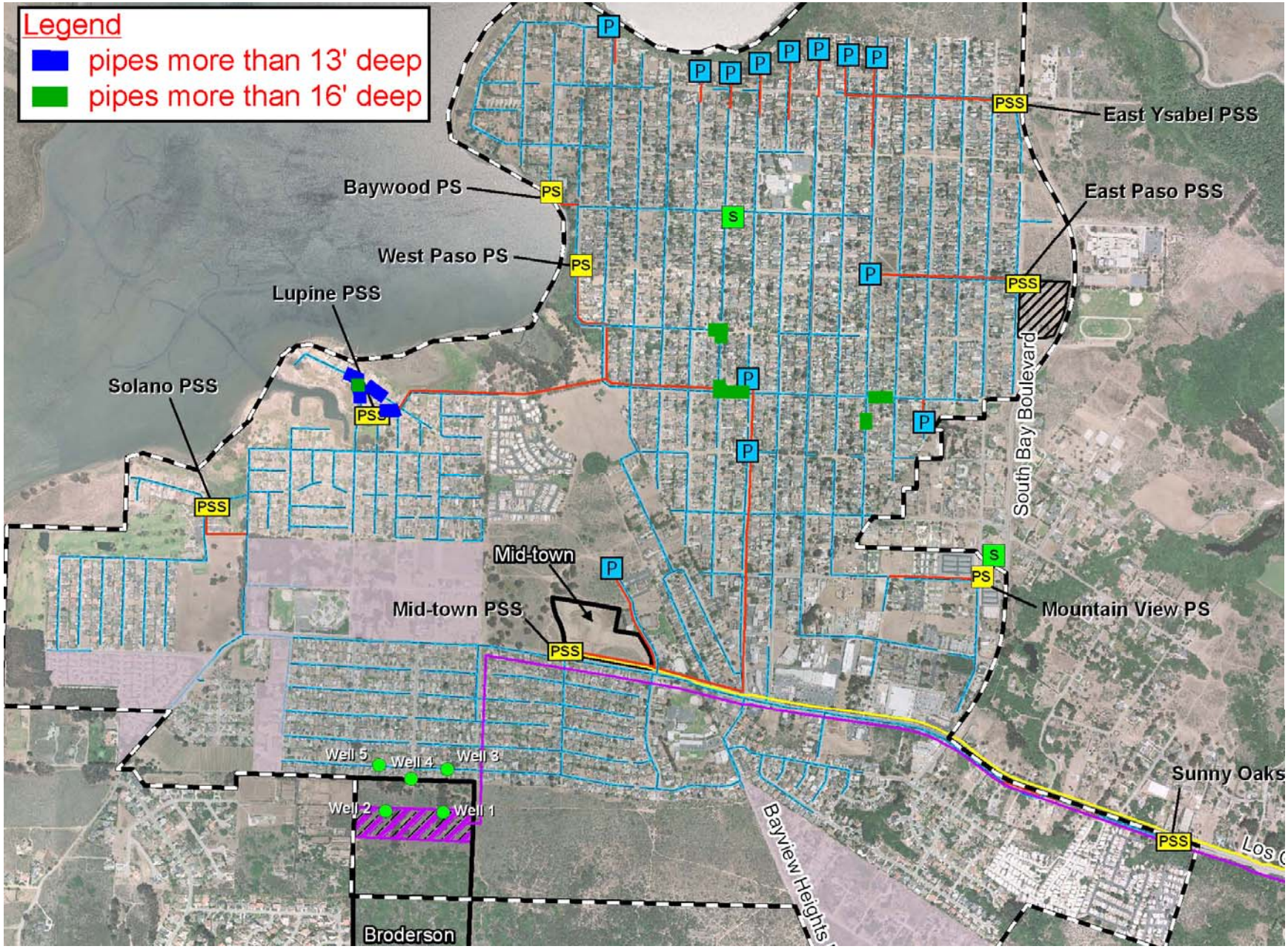
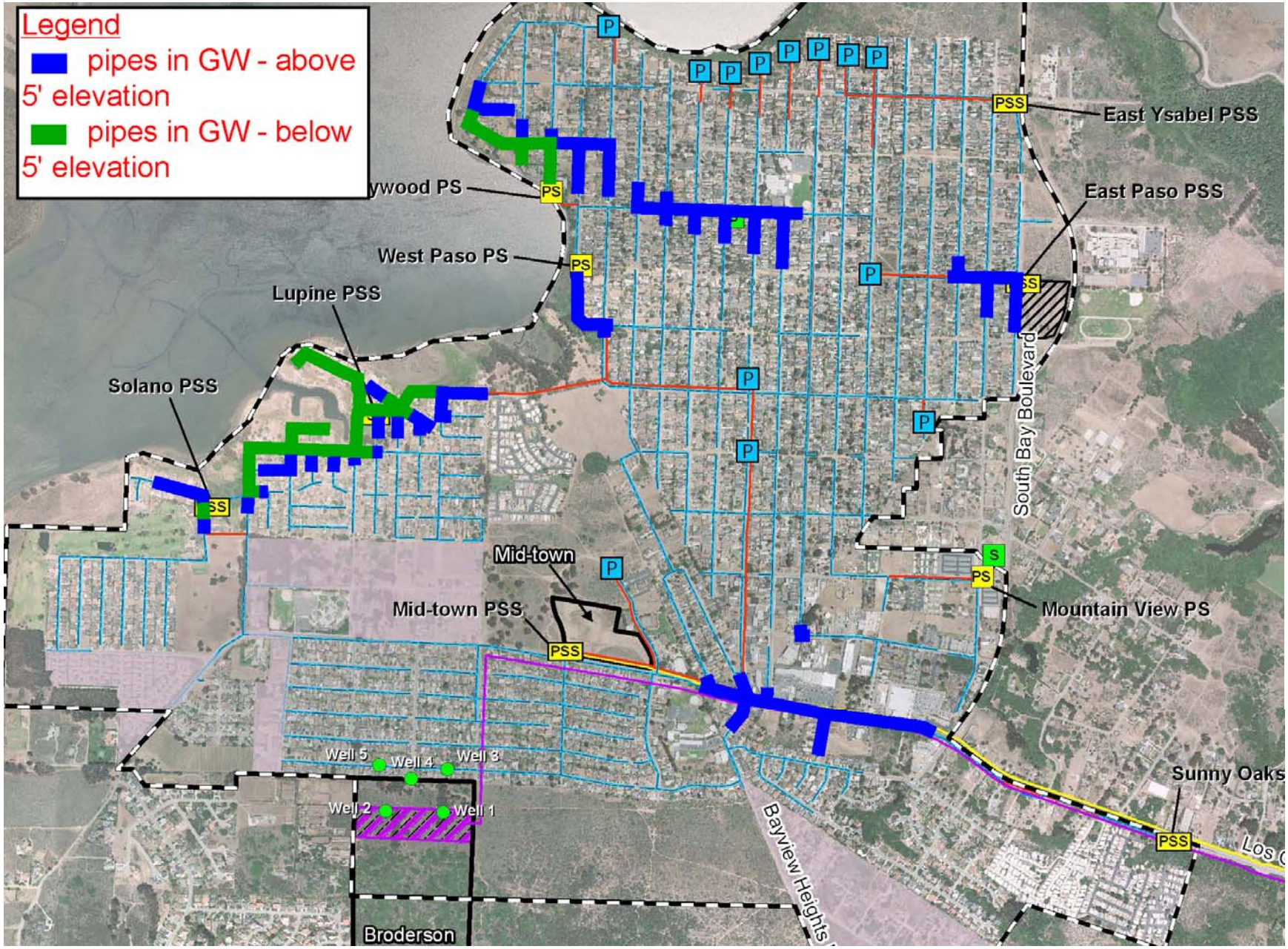
[xix] "Maintenance of PVC Sewer Pipe" Uni-Bell PVC Pipe Association, May 2003

[xx] Cleath and Assoc. Project Memorandum, "Subject: Basin Hydrologic Budget With Simulated Ground Water Elevation Contour Maps" August 7, 2008 (Included as Appendix C to Los Osos Wastewater Project Draft Environmental Impact Report, Appendix D – Groundwater Quality Resources)

[xxi] Cleath and Assoc. E-mail correspondence, "Subject: Sea Level Rise at Bay" June 25, 2009

[xxii] Ohlund, Bob, "Capital Project Construction Bids Significantly Below Budgeted Costs" www.dudek.com, May, 2009

Attachment "A" – Pipes greater than 13 feet deep



Attachment "B" – Pipes below existing groundwater (GW) levels