CALIFORNIA COASTAL COMMISSION

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STAFF REPORT: DE NOVO CDP REVIEW

Application No.:	A-3-MRB-11-001
Applicant:	City of Morro Bay and the Cayucos Community Services District
Location:	160 Atascadero Road in the City of Morro Bay, San Luis Obispo County (APNs 066-331-32, 066-331-33 and 066-331-34).
Project Description:	Demolish an existing wastewater treatment plant and construct a new wastewater treatment plant and related development.
Staff Recommendation:	Denial.

SUMMARY OF STAFF RECOMMENDATION

The City of Morro Bay and the Cayucos Community Services District are proposing to demolish their existing wastewater treatment plant (WWTP) and to construct a new WWTP on the same oceanfront site in the City of Morro Bay just inland of the beach and just upcoast of Morro Rock in the City of Morro Bay. The WWTP site is subject to significant development constraints, and due to the proposed site of the plant, the WWTP project raises significant coastal resource concerns, including with respect to hazard avoidance, public viewshed protection, maximizing and optimizing public access and recreational opportunities and ensuring sustainable public infrastructure. The City approved a coastal development permit (CDP) for the project in early

2011, that CDP was appealed to the Commission by eleven different parties, and in March 2011 the Commission found that the appeals raised substantial Local Coastal Program (LCP) and Coastal Act conformance issues and took jurisdiction over the CDP for the project.

In finding substantial issue, the Commission identified additional information that the Applicant would need to develop and submit before the project could be further considered in a de novo review. Such information included an analysis of alternative siting and design options that could avoid LCP inconsistencies and better address Coastal Act and LCP objectives (hazard avoidance, visual and public access impact avoidance), and identification of a more meaningful wastewater reclamation program that could be made part of the project to help the City carry out LCP policies that prioritize water reclamation to meet water supply needs while enhancing water quality and biological resources. The Applicant has provided the materials identified by the Commission, staff has reviewed them and the other materials in the record, and staff is recommending that the Commission deny the CDP for the proposed project.

The WWTP site is located in a tsunami run-up zone in an area that would also be inundated in a 100-year storm event through a combination of inland flooding (associated with Morro Creek) and ocean flooding, all of which would be exacerbated by sea-level rise over time. The LCP prohibits development in such 100-year flood areas, and the new WWTP cannot be found consistent with the LCP on this point.

In addition, the WWTP site is located in an LCP-designated sensitive view area between Highway 1 and Morro Rock. The LCP requires the scenic and visual qualities of the coast to be protected and where feasible enhanced, and requires development to be sited and designed to protect views to and along the ocean and other coastal areas. The new WWTP would be in a similar location as the plant to be demolished, but would be larger and taller, including to be elevated above flood levels, degrading as opposed to enhancing the shoreline viewshed, inconsistent with the LCP on this point as well.

Further, the WWTP site is located just inland of the beach area in an upland suitable and appropriate for visitor-serving and public recreational use. Currently, the general WWTP area is occupied by the existing WWTP and similar industrial uses (i.e., a cement yard, City corporation yard, etc.), but it also includes some higher priority visitor-serving recreational uses (i.e., an RV park adjacent to the site). More importantly, this is exactly the type of ocean-fronting land that the Coastal Act and the LCP prioritize for public visitor-serving and coastal recreational uses, and not for low priority industrial use. These kinds of ocean-fronting areas are finite, especially when they are publicly owned, and especially when they are located within developed urban areas such as the City of Morro Bay. The WWTP is also uniquely situated in an area near Morro Rock and the Morro Bay Embarcadero – significant visitor destinations – where its potential for recreational use is both enhanced and clearly underutilized, including connecting the Embarcadero area to the portions of the City upcoast of Morro Creek. The WWTP project would site significant industrial development in an area the Coastal Act and LCP prioritize for visitor-serving and public recreational use, further inconsistent with the Coastal Act's access and recreation policies and the LCP.

The WWTP project would produce tertiary treated wastewater, but it only includes a very modest reclamation component, one that is designed to use onsite (and for no other use) only a portion of the reclaimed water that could potentially be produced. The vast majority of the treated wastewater would be discharged to the ocean via the existing WWTP ocean outfall that extends some 2,900 feet into the ocean. The City's LCP not only requires the project to include reclamation, but also requires protection and enhancement, where feasible, of Morro and Chorro groundwater basins, as well as coastal streams, wetlands, and related freshwater resources. Read as a whole, the LCP thus directs a WWTP project to maximize reclamation so that such recycled water can be made available to both offset potable water use as well as to enhance freshwater resources (e.g., through use for agricultural irrigation, urban landscaping, groundwater from the State Water Project and reclamation would provide an important contingency in the event that such water transfers are suspended, reduced, or otherwise impacted (e.g., increase in costs, etc.).

In short, the proposed project is inconsistent with numerous policies of the City's LCP and the Coastal Act, including policies related to coastal hazards, public access and recreation, reclamation, and visual resources, where these inconsistencies are almost entirely related to the Applicant's chosen site. At the same time, the WWTP project is an important project as the current plant results in discharge of primary treated wastewater under certain circumstances, and the Applicant is under a Regional Water Quality Control Board (RWQCB) order to upgrade so that all effluent is treated to at least secondary levels, phasing out the need for a modified National Pollution Discharge Elimination System (NPDES) permit,. In short, the current WWTP results in coastal resource impacts, and a new WWTP is critical to avoiding such impacts.

As part of the Commission-required alternatives analysis, the Applicant evaluated alternative siting options, and after evaluating some 17 sites focused in on two additional sites as potential alternatives for siting the WWTP. Each of the sites shows promise for avoiding coastal resource issues in different ways. Staff believes that the Righetti site, located just out of town on the Highway 41 corridor, represents the most viable option for a new WWTP that can avoid the significant issues with the existing site, and that can provide the most opportunity moving forward for maximizing beneficial recycled water reuse as required by the LCP. The Applicant indicates that an alternative project at that site would cost approximately \$25 million more than a new WWTP at the current site. That difference immediately shrinks to about \$20 million when the actual recent property value of the Righetti site is taken into account (it is on the market for \$2.4 million when the analysis identifies a property acquisition cost of \$7.5 million). The expense of moving to an alternative site, as opposed to constructing a new WWTP at the current location, diminishes to negligible when other factors are considered, including with respect to reduced costs associated with water reuse at the alternative site, and the potential revenue the City could earn/accrue if the existing WWTP site is used for public visitor-serving uses.

Because the Righetti site is located in unincorporated San Luis Obispo County (and just outside City limits), it will require County authorization, and thus cannot be approved under this current appeal/de novo hearing process. In recognition of this, staff has coordinated with the County and has discussed measures to allow for a streamlined review, including potentially a consolidated CDP application directly to the Commission. Staff has also coordinated with the RWQCB, and will continue to work with RWQCB to ensure that use of an alternative site will meet the Board's needs moving forward, including to help foster a better overall project that can meet

LCP requirements, enhance and protect water quality, and meet the community's needs over the longer term with a sustainable and beneficial public infrastructure project.

In conclusion, a WWTP project is needed to address ongoing coastal resource impacts and the RWQCB Order, but a project at the existing WWTP site cannot be found consistent with the LCP. The Applicant's alternatives analysis indicates that a WWTP project can be constructed at the Righetti site, and staff believes that a project at that site will avoid the siting issues presented by the current site, that it can be found consistent with the San Luis Obispo County LCP and the Coastal Act, and that the Applicant should be directed to a WWTP project at the Righetti site. To do that, staff recommends that the Commission **deny** the CDP for the WWTP at the existing site, and further recommends that the Commission provide **direction** to the Applicant to pursue a project at the Righetti site. Staff believes that such recommendation is good coastal planning and public policy, that it is required for LCP and Coastal Act consistency, and that it will provide for a WWTP project that can appropriately address coastal resource problems in a manner that provides long-term sustainable public infrastructure. Staff stands ready to facilitate and streamline the necessary review and authorization process for the alternative site as much as possible. The motion is found on page 5 below.

TABLE OF CONTENTS

MOTION AND RESOLUTION	5
FINDINGS AND DECLARATIONS	5
A. PROJECT LOCATION	5
3. Project Description	7
C. HAZARDS	14
D. PUBLIC ACCESS AND RECREATION	19
E. VISUAL RESOURCES	24
F. WATER RECLAMATION AND BIOLOGICAL RESOURCES	25
G. Archeology	31
I. CDP DETERMINATION CONCLUSION	32
. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)	35
	 MOTION AND RESOLUTION FINDINGS AND DECLARATIONS A. PROJECT LOCATION B. PROJECT DESCRIPTION C. HAZARDS D. PUBLIC ACCESS AND RECREATION E. VISUAL RESOURCES F. WATER RECLAMATION AND BIOLOGICAL RESOURCES G. ARCHEOLOGY H. CDP DETERMINATION CONCLUSION CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

APPENDICES

Appendix A – Substantive File Documents

EXHIBITS

- Exhibit 1 Location Map
- Exhibit 2 Site Area Photos
- Exhibit 3 Proposed WWTP Plans
- Exhibit 4 Flood Hazard Mapping
- Exhibit 5 Applicant Alternatives Analysis
- Exhibit 6 Correspondence Received
- Exhibit 7 Commissioner Ex Parte

I. MOTION AND RESOLUTION

Motion:

I move that the Commission **approve** Coastal Development Permit A-3-MRB-11-001, and I recommend a no vote.

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present

Resolution:

The Commission hereby denies a coastal development permit for the proposed development on the ground that the development will not conform with the policies of the Local Coastal Program and the access and recreation policies of the Coastal Act. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

II. FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

A. PROJECT LOCATION

The proposed project is located just inland of the dunes and along the immediate shoreline north of Morro Creek just upcoast of Morro Rock in the City of Morro Bay.

City of Morro Bay Setting

The City of Morro Bay is located on the shores of Morro Bay and the Pacific Ocean near the middle of the larger Estero Bay area in San Luis Obispo County (see Exhibit1). Along the shoreline, the City includes the Embarcadero area to the south fronting along Morro Bay proper, as well as the area north of Morro Creek containing an industrial area, RV park, Morro Bay High School, Del Mar Park, Cloisters Community Park and residential subdivision to the north, with the Morro Bay Power Plant site roughly bisecting the two. Embarcadero Road, which runs through the Embarcadero Area and also runs parallel along the beach, fronting the RV park shoreward of the wastewater treatment plant, is not continuous as there is no bridge over Morro Creek that would connect the area of the wastewater treatment facility to the Embarcadero area.

Until the mid-1940's, most of the small community of Morro Bay was built on the bluff tops above the tidal flats. Between 1942 and 1945, the north and south breakwaters at the entrance to the Morro Bay harbor, two "T"-piers, and the inner harbor bulkhead were constructed for a Navy amphibious base. A navigational channel was dredged and the spoils deposited behind the inner harbor bulkhead to create a fill area along the bay that became known as the Embarcadero. In the late 1940's the Navy base, including all waterfront facilities, was sold to San Luis Obispo

County. Buildings began to be constructed on the Embarcadero, and various docks and piers were occupied by a growing fleet of commercial fishing boats. In the early 1950s, the County sold a portion of the old Navy base property to PG&E, which was later used to construct the Morro Bay Power Plant, now a defining feature in Morro Bay. In 1964, the City of Morro Bay incorporated and assumed jurisdiction over the County's waterfront land and facilities, including the Embarcadero. Trusteeship of state tidelands was also transferred to the City at that time. The area north of the Power Plant was developed originally starting in 1954. The Cloisters subdivision was constructed in phases starting in 1992, and is almost at full build-out today.

The City and the Embarcadero are major tourist attractions and prime coastal visitor-serving destinations with an estimated 1.5 million visitors annually. The Embarcadero is now largely developed with a variety of visitor-serving (overnight units, restaurants, gift shops, etc.) and coastal-related land uses (i.e., kayak rental, commercial and recreational fishing services, etc.). Parcels on the bayside of Embarcadero are leased to individual lessees by the City through the City's proxy relationship to the State Lands Commission.

Morro Bay and the surrounding area include a variety of biological habitats, including coastal wetlands, intertidal mud/salt flats, rocky subtidal and intertidal zones, riparian corridors and woodlands. All of these habitats provide highly productive, diverse and dynamic ecosystems. Central to this habitat framework is the Morro Bay Estuary itself. This mostly shallow lagoon is approximately 2,500 acres and is sheltered from the open ocean by the sandspit and constructed breakwater. It is considered the most significant wetland system on California's south central coast. The Bay serves as a critical link of the Pacific Flyway by providing important habitat for resident and migrating shorebirds and waterfowl. The Audubon Society has ranked Morro Bay as one of the top five areas out of nearly 1,000 sites nationwide for diversity of winter bird species.¹

The Bay is home to a diverse collection of fish and wildlife species, many of which are rare, threatened, endangered, and/or endemic to the bay. For example, the estuary serves as resident and nursery habitat for the federally endangered tidewater goby and the steelhead trout, and other fish and shellfish. Other examples of federally threatened or endangered species that depend on the estuary and its watershed for their survival and recovery include: snowy plover, brown pelican, California black rail, California red-legged frog, Least Bell's vireo, Morro shoulderband snail, Southern sea otter, California clapper rail, Southwestern Willow Flycatcher, and the Morro Bay kangaroo rat. In addition, the bay supports a diverse and wide range of marine organisms including fish, shellfish, invertebrates, and other taxa (e.g., phytoplankton, zooplankton and jellyfish. It also supports recreational and commercial fisheries, and also provides commercial shellfish harvests.

Morro Bay also includes the largest eelgrass beds in the southern part of the state, with dense stands located in the lower intertidal areas and shallow channels within the Bay. These beds are a complex and highly productive environment, serving as a spawning and nursery ground for many species of fish (e.g., halibut, English sole, topsmelt, shiner perch, speckled sanddab, plainfin midshipmen, arrow and bay goby), and larger invertebrates (e.g., bay shrimp, spiny cockle, nudibranchs, cancer crabs, yellowshore crab). The dense foliage serves a number of functions

¹ For example, the Audubon Society estimates indicate that 200 different bird species have been identified using the Bay during a single day in December, including approximately 25,000 black brants.

such as substrate for epiphytic flora, fauna, and microbial organisms that decontaminate the Bay's water, and as a moderator of current and wave action, allowing suspended sediments and organic particles to settle, thereby improving water quality. Moreover, the eelgrass habitat in Morro Bay is the only significant eelgrass habitat in central and southern California available to the black brant during its annual migration to and from Mexico.

Morro, Chorro and Los Osos Creeks and several smaller tributaries drain into the bay. The creeks and their associated riparian areas provide habitat for fish and other aquatic organisms as well as food and shelter for migratory birds and other animals. In addition, they provide important habitat for the federally endangered steelhead trout. Steelhead trout are anadromous fish, which are spawned in streams, spend a portion of their life cycle in the ocean, and then return to the stream where they were spawned to reproduce.

Project Site

The proposed project is located at 160 Atascadero Road just inland of the beach and dunes and seaward of Highway 1 just upcoast of the Embarcadero, the Morro Bay Power Plant,² Morro Creek, and the area defining Morro Rock. The site is occupied by the existing City of Morro Bay and the Cayucos Community Services District³ wastewater treatment plant (WWTP), and it includes clarifiers, trickling filters, sludge drying beds, operations buildings, and related WWTP development (see Exhibit 1 and 2 for maps and Exhibit 2 for site area photos). It is immediately adjacent to the Morro Dunes R.V. Park and Trailer Storage, Morro Bay High School, the City corporation yard, and a cement business. The project site is zoned Light Industrial/Planned Development/Interim use by the LCP, which defines these zones respectively as: light industrial allows for manufacturing and other industries while minimizing offensive or objectionable noise, dust, odor or other nuisances; planned development allows for analysis of those parcels which because of location, size or public ownership warrant special review; the interim overlay properties held for future use may be approved for interim uses to allow for proper utilization of the land.⁴

B. PROJECT DESCRIPTION

Project Background

The existing WWTP was initially constructed in 1954, and it was upgraded in 1964 and again in the early 1980s. The upgrades in the early 1980s included updating the WWTP design to provide secondary treatment for up to 0.97 million gallons per day (mgd) of wastewater; increasing the capacity to accommodate the current peak season dry weather flow (PSDWF) of 2.36 mgd; and

² The power plant is in the midst of a downsizing and complete modification project that includes essentially dismantling and removing the existing power plant, except for its intake and outfall lines, and potentially constructing two new 600-megawatt power generation units at the site. There have also been a variety of alternative reuse concepts that have been identified for the plant and the plant site, and it is also possible that it ceases to be used for power generation and instead is turned over to other development and uses, including in light of its prime shoreline location and Coastal Act and LCP land use and development priorities for same.

³ Co-applicants for the proposed project, and the operators of the WWTP under a joint powers agreement.

⁴ City of Morro Bay Zoning Ordinances 17.24.140; 17.40.030; and 17.40.080.

extending the ocean outfall pipeline to 2,900 feet offshore.⁵ The existing WWTP is rated for an average dry weather flow (ADWF) of 2.06 mgd, a PSDWF of 2.36 mgd, and a peak hourly flow (PHF) equating to 6.6 mgd. The existing plant is equipped to treat up to 0.97 mgd of wastewater to secondary treatment levels, and to treat wastewater in excess of 0.97 mgd to primary treatment levels. Between 1995 and 2009, the WWTP treated an annual average measured daily flow of 1.25 mgd, and thus the existing WWTP has been discharging some effluent to the ocean that has only been treated to a primary level for many years.

The WWTP discharges treated effluent to the Pacific Ocean via ocean outfall and is regulated by a National Pollutant Discharge Elimination System (NPDES) Permit in accordance with Section 402 of the federal Clean Water Act. The WWTP is currently covered by a modified NPDES permit with a Clean Water Act Section 301(h) waiver, which waives the Clean Water Act minimum treatment requirement for full secondary treatment for all discharge. The Regional Water Quality Control Board (RWQCB) generally issues NPDES permits to waste dischargers every five years. The Morro Bay-Cayucos NPDES permit was first issued with a 301(h) waiver in 1985, and was re-issued with the same waiver in 1993, 1999 and 2008. Prior to the 1999 reissuance, RWOCB staff requested that the Applicant consider upgrading the facility to full secondary treatment to comply with the Clean Water Act, as opposed to continuing to request a 301(h) waiver from discharge requirements, and to avoid discharging inadequately treated effluent into the ocean. The Applicant determined that such an upgrade was not feasible at that time, and again requested that RWOCB issue the 301(h) waiver-modified permit. In November 2005, RWQCB agreed to re-issue the 301(h) waiver-modified permit. In December 2005, the Applicant and RWQCB reached a settlement agreement to pursue a schedule for a full upgrade of the plant to eliminate the need for a 301(h) waiver-modified permit in the future. According to the terms of the current settlement agreement, the WWTP must be modified so that all effluent is treated to at least secondary levels, phasing out the need for a modified NPDES permit, by March 2014. The WWTP serves some 13,000⁶ customers in both the City of Morro Bay as well as in the unincorporated community of Cayucos to the north of Morro Bay

Project Description

The proposed project provides for demolition of the existing WWTP facilities and construction of new WWTP facilities and related development on the same site (see Exhibit 3 for Project Plans). The new WWTP would be built mostly on the site of the existing sludge drying beds on the south side of the site. As soon as the new WWTP is completed, the old WWTP would be demolished. After demolition of the existing facilities, the northern portion of the site would be left vacant under the proposed project. The new WWTP facilities would include pumping stations, secondary clarifiers, oxidation ditches and a chlorine contact basin, as well as maintenance and operations buildings. The project also includes construction of new access roads, new fencing and landscaping.

The new facilities would provide secondary treatment to all wastewater effluent, with a tertiary filtration capacity of up to 1.5 mgd. The secondary treated water would be discharged as effluent

⁵ A 1981 CDP has been identified that appears to apply to this work, but as of the date of this report the file has not yet been retrieved from State archives so it is not clear what exactly was covered by that 1981 CDP.

⁶ http://ca-morrobay.civicplus.com/index.aspx?NID=342

via the existing WWTP ocean outfall, which would be connected to the new facility as part of the proposed project. The wastewater that is treated to tertiary levels (up to 1.5 mgd) would meet Title 22 standards for disinfected recycled water. The applicant proposes to use only 0.4 mgd of that disinfected tertiary recycled water for on-site uses such as soil compaction, concrete mixing and dust control, and potentially for off-site uses, including agricultural irrigation, groundwater replenishment and residential landscaping. Such future reclaimed water for off-site uses would be made available through the new truck filling station that is part of the approved project. Thus, the proposed project would meet the RWQCB Order (and the settlement agreement) by treating all effluent to at least secondary treatment levels prior to discharge (i.e., 1.5 mgd to tertiary levels and anything above that to secondary levels).

Prior Commission Action

On December 20, 2010, the City of Morro Bay Planning Commission unanimously denied a CDP for the proposed project, and denied certification of its associated environmental impact report (EIR). In making this decision, the City Planning Commission found that the proposed project could not be approved consistent with the LCP, including because the project was analyzed as an upgrade to existing development, when it actually constitutes a new project; because the EIR analysis was not sufficient; because the visual impacts were not minimized; and because there was an insufficient scoping process for the project. The Applicant appealed the Planning Commission's denial to the City Council, and on January 11, 2011, the City Council approved the CDP and certified the EIR.

The City's CDP approval was appealed to the Commission by eleven different parties, and on March 11, 2011 the Commission determined that the City's approval raised a substantial issue of conformance with the LCP and the public access and recreation policies of the Coastal Act, and took jurisdiction over the CDP application for the proposed project. In coming to this conclusion, the Commission adopted the following findings:

The City-approved project raises significant coastal resource issues, including with respect to hazard avoidance, public viewshed protection, maximizing and optimizing public access and recreational opportunities, protection of archeological resources, and sustainable public infrastructure requirements. The project site is subject to multiple significant constraints, including risks from a variety of coastal hazards, a location within a scenic public shoreline viewshed, and the presence of significant archeological resources. In addition, it is located on prime oceanfront land where it is not clear that continuation of industrial use is appropriate in light of LCP and Coastal Act objectives, and it may well be that the site is better-suited for public access and recreation. The City also authorized a major public works project which does not appear to have properly countenanced the sustainable public works provisions of the LCP.

The City's approval is fundamentally flawed in that it lacks a thorough alternatives analysis that evaluates a broad range of alternatives, including fundamentally in terms of alternative appropriate sites, such as is required to be able to find a WWTP project consistent with the LCP and the Coastal Act. Such alternative sites, especially if located further inland, have the potential to completely avoid the constraints of the subject site, and the potential to allow consideration of a WWTP project that can resolve other coastal resource issues associated with the City-approved project. As it is, it appears that the City-approved project is inconsistent with the LCP and the Coastal Act on multiple grounds, perhaps most critically because it is not clear that WWTP development at this site can even be found LCP and the Coastal Act consistent in terms of hazards avoidance, public recreational access, the public viewshed, sustainable use of public resources, and archaeological protection.

In finding substantial issue, the Commission identified additional information that the Applicant would need to develop and submit before the project could be further considered in a de novo review. Such information included the need for better identification of hazard issues at the existing WWTP site, an analysis of alternative siting and design options that could avoid LCP inconsistencies and better address Coastal Act and LCP objectives (e.g., hazard avoidance, visual and public access impact avoidance, etc.), and identification of a more meaningful wastewater reclamation program that could be made part of the project to help the City carry out LCP policies that prioritize water reclamation to meet water supply needs while enhancing water quality and biological resources. The Applicant has prepared and provided the identified materials, and these are described below.

Alternative Sites Analysis

The Applicant's alternative sites analysis consists of a rough screening designed to flag a range of potential alternative sites, and a fine screening of the sites considered feasible.⁷ For rough screening, the Applicant analyzed 17 potential alternative project sites that were identified through public workshops as potential locations for a new WWTP. The rough screening was intended to eliminate sites with 'fatal flaws' that would preclude WWTP development from further consideration. Per the rough screening methodology, fatal flaws were those where the following applied: (1) development at the site would be "inconsistent with the City or County LCPs or California Coastal Act policies regarding protection of prime agricultural soils or actively farmed coastal farmland"; (2) the site contains "environmentally sensitive habitat areas (ESHA), as defined by the City or County LCPs or California Coastal Act, such that avoidance is infeasible and/or related buffers would result in an inadequate developable site envelope": and/or (3) the new development would be located and prohibited within "the 100-year flood hazard zone as delineated by the City or County LCPs or identified on FEMA flood insurance maps and/or within other inundation zones, such that avoidance is infeasible and strictly prohibited pursuant to City or County LCP policies, and/or related mitigation results in an inadequate developable site envelope".⁸ Six of the 17 sites initially analyzed were deemed to be fatally flawed.

The 11 remaining sites were then evaluated with respect to the following criteria: (1) Environmental Considerations/LCP policies (ESHA/biological resources, water quality, coastal priority land use, coastal dependent development, floodplain hazards, shoreline development/coastal hazards, public access/recreation, visual resources, agriculture, cultural resources, sustainable use of public resources, land use compatibility and energy consumption/greenhouse gas emissions); (2) Logistics/Site Constraints (land use, zoning, regulatory restrictions, site accessibility, site availability, implementation and additional site

⁷ The Applicant coordinated with Commission staff on the alternative sites analysis, including the methodology employed for both rough and fine screening components.

⁸ Rough Screening Alternative Sites Evaluation, pages 9-10.

requirements); and (3) Engineering and Economic Constraints (treatment/disposal options, recycled water opportunities/demands, proximity to existing wastewater conveyance facilities and comparative economic feasibility). The 11 remaining sites were ranked according to their consistency with (or amount that they were constrained by) these factors, with the highest ranked sites being for those that yielded the least environmental impact, the greatest LCP and Coastal Act consistency, the fewest land use, logistical and site constraints and the greatest degree of economic feasibility. The three sites that the Applicant's rough screening rated best were the current WWTP site, the old Chevron facility site (located between Cayucos and Morro Bay),⁹ and a site just inland of Morro Bay known as the Righetti site (see map of alternative sites in Exhibit 5).

The Chevron site is some 160 acres (consisting of both the marine terminal and row crop, hay lands and sheep grazing land inland)¹⁰ and is located southeast of Toro Creek, spanning both sides of Toro Creek Road on the inland side of Highway 1 along the generally undeveloped piece of shoreline between the residential neighborhoods making up the City's northern boundaries and the unincorporated community of Cayucos further upcoast. The site is occupied by the remnants of Chevron's old facility nearest the coast, and primarily agricultural uses extending inland. The Chevron facility itself is at the lowest elevation on the property, while the rest of the site consists of undeveloped rolling hills that range from gentle (near the road) to steep (on the hillsides). The property is interspersed with secondary drainages to Toro Creek. The site is surrounded primarily by open space and agricultural areas.

The Righetti site is approximately 260 acres¹¹ located adjacent to the City of Morro Bay city limits and north of Highway 41. The western boundary of the Righetti site is located just east of the boundary of the developed, residential areas of the City of Morro Bay. Currently the site consists of a single-family residence and grazing areas. The land is surrounded by cropland to the south, undeveloped areas to the north and east and a mobile home park and agricultural lands to the east.

These three sites rated best by the Applicant's rough screening analysis were then subjected a fine-screening analysis where the three sites were assessed in the context of site constraints and a more detailed LCP and Coastal Act policy consistency analysis than the rough screening applied, all premised on continuing to ensure that all three sites could meet project goals and objectives, and could feasibly accommodate construction of a WWTP project. The fine-screening analysis used three broad categories of evaluation criteria that were weighted in terms of relative importance, as follows: (1) Avoid and Minimize Environmental Impacts/Local Coastal Program Consistency Analysis – 40% weighted; (2) Project Implementation – 30%; and (3) Economic Factors – 30%. Based on this ranking system, the Applicant concluded that the existing WWTP site was the best site amongst the three.¹² The Applicant's conclusions were based on their

⁹ The Chevron facility was historically a crude oil storage and loading facility. Chevron has been in the process of remediation for a number of years, and currently Chevron's Estero Marine Terminal property and agricultural uses are supported on the land.

¹⁰ Fine-Screening Analysis, pages 96-97.

¹¹ Fine-Screening Analysis, page 152.

¹² Per the Applicant's ranking, the existing WWTP site had a score of 4.54 compared to scores of 3.32 for the Righetti site and 2.82 for the Chevron site.

assessment that the current WWTP site was the best and most feasible alternative site for development of the new WWTP based on its consistency with LCP and Coastal Act policies, its ability to reduce environmental impacts to a less than significant level, and because it presents the most streamlined project implementation schedule while being the most cost-effective option for the rate payer within the service area. See the Applicant's alternatives analysis in Exhibit 5.

Additional WWTP Site Hazards Analysis

In response to the Commission's request for a more robust description and analysis of the coastal hazards at play at the existing WWTP site, the Applicant provided updated materials describing shoreline erosion and flood hazards for the site, including with respect to sea level rise, as well as an assessment of the ability of the existing dunes seaward of the WWTP site to effectively protect the site from coastal hazards.¹³

Recycled Water Feasibility

In taking jurisdiction over the CDP application, the Commission adopted findings that state:

The Applicant must also provide a complementary, updated water reclamation feasibility study that explores all potential demand for reclaimed water, including for agricultural irrigation inside and outside of the City limits, and the way in which the project could be reconceived to dispose of treated effluent in this manner. The study must evaluate the feasibility of constructing infrastructure to accommodate such water reclamation program, and it must evaluate the benefits of a water reclamation program, including potential benefits to stream habitats and water supply, potential revenue generation from providing such water to users and offsetting the need for purchased State Water credits, and the potential for elimination of the existing ocean outfall

In response, the Applicant submitted a "Recycled Water Feasibility Study" (by Dudek Environmental Consultants and dated March 9, 2012) that evaluates opportunities for more thoroughly incorporating water recycling and reclamation into the project in its current location to augment the City of Morro Bay and surrounding area's water supply (for irrigation uses, agricultural uses, stream replenishment and beneficial reuse). The study also includes a market analysis for recycled water looking for potential users, costs to those users for the recycled water, and market enthusiasm for such recycled water use. Finally, the study gave recommendations to move forward to incorporate additional water reclamation/recycling into the final WWTP project.¹⁴ Specifically, the study recommends that the current site be upgraded to tertiary treatment, that the water treated to tertiary levels be used as "wash down and process water",¹⁵ that upon completion of the upgrade, opportunities for local reuse continue to be explored, that in collaboration with other stake holders, a Salt and Nutrient Management plan be devised and

¹³ "Shoreline Erosion Study and 100-Year Sea Wave Run-Up Analysis" (by Dudek Environmental Consultants and dated October 28, 2011), "Maximum Tsunami Flood Elevations" (by Dudek Environmental Consultants and dated February 1, 2012), "Morro Creek Flood Analysis with Wave Run-Up and Sea Level Rise (Addendum to Flood Study dated 8/7/09)" (by Dudek Environmental Consultants and dated January 10, 2012), and two memos with additional information regarding the dune fields at the current WWTP site (by Dudek Environmental Consultants and dated July 2, 2012 and July 9, 2012).

¹⁴ That is, to incorporate additional measures beyond what was proposed in the CDP application that was originally approved by the City.

¹⁵ Draft 2012 Recycled Water Feasibility Study, Presentation to JPA, April 12, 2012.

opportunities for water reuse at golf courses will be explored, that opportunities for recycled water implementation continue to be explored, that the current water conservation program continue, and that the water supply and demand data be updated every five years when the Urban Water Management Plan is updated.¹⁶ These recommendations came from the study team, and the Applicant requested that they be included as a part of the proposed project.

The Commission's Jurisdiction

The Commission notes that the Coastal Act imposes specific review criteria on the Commission when a "treatment work", such as the proposed project, is considered by the Commission. Such criteria are part of Coastal Act Chapter 5, which identifies the manner in which the Coastal Act is to be understood in relation to other state agencies and their programs. Chapter 5 identifies the Legislature's intent that the Coastal Act not "increase, decrease, duplicate or supersede the authority of any [then] existing state agency", while requiring all state agencies to "carry out their duties and responsibilities in conformity with [the Coastal Act]".¹⁷ Coastal Act Section 30412 includes guidance on implementation of the Coastal Act in relation to the programs of the State Water Resources Control Board (SWRCB) and the RWQCBs. It states in relevant part:

(b) The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. The State Water Resources Control Board has primary responsibility for the administration of water rights pursuant to applicable law. The commission shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not, except as provided in subdivision (c), modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights.

Except as provided in this section, nothing herein shall be interpreted in any way either as prohibiting or limiting the commission, local government, or port governing body from exercising the regulatory controls over development pursuant to this division in a manner necessary to carry out this division.

- (c) Any development within the coastal zone or outside the coastal zone which provides service to any area within the coastal zone that constitutes a treatment work shall be reviewed by the commission and any permit it issues, if any, shall be determinative only with respect to the following aspects of the development:
 - (1) The siting and visual appearance of treatment works within the coastal zone.
 - (2) The geographic limits of service areas within the coastal zone which are to be served by particular treatment works and the timing of the use of capacity of treatment works for those service areas to allow for phasing of development and use of facilities consistent with this division.

¹⁶ Draft 2012 Recycled Water Feasibility Study, Presentation to JPA, April 12, 2012.

¹⁷ Coastal Act Sections 30401 and 30402.

(3) Development projections which determine the sizing of treatment works for providing service within the coastal zone.

The commission shall make these determinations in accordance with the policies of this division and shall make its final determination on a permit application for a treatment work prior to the final approval by the State Water Resources Control Board for the funding of such treatment works. Except as specifically provided in this subdivision, the decisions of the State Water Resources Control Board relative to the construction of treatment works shall be final and binding upon the commission.

As a result of this section, the Commission's review of a treatment work is limited to questions of siting and visual impacts and appropriateness of service areas (including in terms development projections that may determine the size of the treatment work). Of note, siting questions involve all aspects of siting and not just the treatment plant itself, including mitigation required to offset impacts caused by siting decisions. In this context, the Commission's review appropriately extends to siting related to recycled water reuse and evaluation of such reuse components in terms of LCP and Coastal Act requirements.

C. HAZARDS

Applicable Policies

The LCP requires development to avoid hazards, minimize risks to life and property, and minimize landform alterations. In addition, development that creates or contributes to erosion or geologic instability is prohibited. Relevant LCP hazards policies include:

LUP Policy 9.03. All development, including construction, excavation and grading, except for flood control projects and agricultural uses shall be prohibited in the 100-year floodplain areas unless off-setting improvements in accordance with the HUD regulations are required...

LUP Policy 9.05. Plans for development shall minimize cut and fill operations. Plans showing excessive cutting and filling shall be modified or denied if it is determined that the development could be carried out with less alteration of the natural terrain.

LUP Policy 9.06. All development shall be designed to fit the site topography, soils, geology hydrology, and any other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. To accomplish this, structures shall be built to existing natural grade whenever possible. Natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible. Areas of the site which are not suited to development because of known soil geologic, flood, erosion or other hazards shall remain in project open space.

IP Section C.2.c.1.0 Provide for the identification and evaluation of existing structural hazards, and abate those hazards to acceptable levels of risk.

IP Section C.2.c.2.0 Ensure that new development within the City's jurisdiction is designed

to withstand natural and man-made hazards to acceptable levels of risk.

The LCP requires landform alterations to be minimized, including LUP Policy 9.05's requirement that development minimize cut and fill, and that projects that have excessive cut and fill to be modified or denied if the development could be carried out with less alteration of the natural terrain. LUP Policy 9.06 requires development to be designed to fit the site topography, soils, geology, hydrology, and any other existing conditions so that grading and other site preparation is kept to a minimum. The LCP also describes the risks of flooding within the City. Page 156 of the LCP states that the floods of 1969 and 1973 showed that flooding could have been worse if the flood plain had been more highly developed, and on page 157, the LCP specifically identifies the fact that the existing WWTP is located in the flood plain as one of the City's flood-related problems. The LCP goes on, in Policy 9.03, to prohibit all new development in 100-year floodplain areas, except for flood control projects, agricultural uses, and off-setting improvements required by the Department of Housing and Urban Development (HUD) regulations. Finally, the LCP references the hazards to which the City of Morro Bay is subject in Chapter 10, specifically mentioning flooding in the Morro and Chorro Creek watershed. Chapter 10 of the LCP's IP also references Coastal Act Section 30253 as guiding the policy for addressing hazards in the City, where Section 30253 specifically states that "new development shall minimize risks to life and property in areas of high geologic, flood and fire hazard" and "assure stability and structural integrity and neither create not contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area...".

Hazards Consistency Analysis

LUP Policy 5.03

In its original CDP approval, the City also applied LUP Policy 5.03. LUP Policy 5.03 states:

The Morro Bay Wastewater Treatment facilities shall be protected in their present location since an important operational element, the outfall line, is coastal-dependent.

This policy allows for protection of the existing WWTP at its current location based on a determination that the ocean outfall line is coastal-dependent.¹⁸ However, this policy does not apply to the proposed project because this project is for construction of a *new* WWTP. The policy in question is meant to indicate that the existing plant could be protected in situ (e.g., a floodwall to address flooding) if that were deemed appropriate for other reasons, but it is not a basis to justify a replacement plant incorporating different technologies at the same location.

In addition, Policy 5.03 is itself based on a premise that the ocean outfall line is coastal dependent. In other words, the policy is not based on the WWTP being identified as coastal dependent, rather just the ocean outfall. Current technology may allow for the elimination of the ocean outfall altogether, as shown by the recently approved wastewater plant in nearby Los

¹⁸ The policy refers to "The Morro Bay Wastewater Treatment facilities", not future facilities, redeveloped facilities, generic wastewater facilities, or new facilities, but rather The Morro Bay Wastewater Treatment facilities. The LCP does not identify any future development in this context, nor does it explicitly protect any such future development at the site. It only references the facilities as they existed when the LCP was drafted. Thus, absent additional explanation, the policy must be read in the time and context in which it was written, namely referring to the existing WWTP facilities.

Osos,¹⁹ in which case the LCP could be amended to remove this section. More importantly, the existing coastal-dependent ocean outfall could still be used by a plant that is located further inland. In short, despite the Applicant's reliance on LUP Policy 5.03,²⁰ LCP Policy 5.03 was designed to protect the coastal-dependent outfall line and the existing facility that relied on it. It should not be interpreted, as the Applicant urges, as a sort of LCP "override" for siting an entirely new WWTP facility.

100-Year Floodplain

The 100-year floodplain is defined in the LCP as "the area subject to flooding in a major storm which has the potential for occurring once during a 100-year period"²¹ and was defined in the Applicant's flood hazard analyses as the "flood that has a 1% chance of being equaled or exceeded in any given year".²²

The WWTP site is situated in a "topographic depression, situated between higher ground to the east and a narrow swath of dunes to the west".²³ The majority of the project site lies in the FEMA-identified 100-year flood zone,²⁴ and the proposed project plans show that the new facility itself is situated partly (around 50%) within this zone (see Exhibit 4). In addition, the site experiences both localized drainage problems and larger flooding problems,²⁵ and according to the LCP, the WWTP site -and other areas "near the lower reach of Morro Creek as it empties into the sea" are subject to the 100-year flood.

Flooding at the WWTP site is associated with both ocean flooding (in storms) as well as flooding from Morro Creek. The Applicant's recent submittal to the Commission evaluated 100-year flood potential assuming wave run-up of 11.1 feet, sea level rise of 4.6 feet and a simultaneous occurrence of sea level rise, maximum wave run-up, and a 100-year flood.²⁶ Per the Applicant's estimates, the WWTP site (including the footprint of the proposed new WWTP) would be under 2.8 to 4.7 feet of water during a 100-year flood event.²⁷ Thus, in a 100-year storm (i.e., a major storm which has the potential for occurring once during a 100-year period), the entire existing

¹⁹ The Los Osos WWTP, approved by the Commission last year, was premised on returning all treated wastewater effluent to beneficial uses, and did not include any ocean outfall.

²⁰ Including its alternatives analysis and rankings that rely on LUP 5.03 in relation to the existing WWTP site. When LUP Policy 5.03 is appropriately discounted, and when LUP Policy 9.03 is appropriately applied, application of these LCP policies to the existing WWTP site would lead to a different outcome in the Applicant's alternatives analysis, perhaps even resulting in the proposed site being found to have a 'fatal flaw,' in terms of the Applicant's alternatives analysis methodology.

²¹ IP Section 17.12.283.

²² Flood Hazard Analysis, page 2.

²³ Flood Hazard Analysis, page 4.

²⁴ The FEMA flood zone refers to FEMA maps (FEMA Flood Insurance Rate Maps (FEMA/FIRM)) that depict the boundaries and depths of flooding in a 1% chance (100-year) flood. The FEMA/FIRM maps do not take into account sea level rise due to global warming nor the simultaneous occurrence of 100-year flooding coming from both inland and seaward sides, as would affect this site.

²⁵ Flood Hazard Analysis, page 4.

²⁶ Morro Creek Flood Analysis with Wave Run-up and Sea Level Rise (Addendum to the Flood Study Dated 8/7/09), page 1.

Morro Creek Flood Analysis with Wave Run-up and Sea Level Rise (Addendum to the Flood Study Dated 8/7/09), Exhibit 6B.

WWTP site is located in an area subject to significant flooding. As a result, the site is located in the 100-year floodplain area as defined by the LCP. Because this policy prohibits all development in the 100-year floodplain, subject to exceptions that do not apply in this case,²⁸ the proposed project cannot be found consistent with LUP Policy 9.03.

Despite the clear language of LUP Policy 9.03,²⁹ the Applicant indicates that these issues are mitigated by the protective ability of the existing dune field seaward of the site and can be mitigated further by elevating the facilities using some 2-4 feet of fill. In terms of the former, dunes can only provide so much protection, as evidenced by the Applicant's own predictions that the site will be under water in a 100-year storm, even accounting for dune protection. Further, although these dunes currently appear to be relatively stable, they are fairly narrow, subject to foot traffic, and are currently migrating at an estimated rate of about 1 foot per year.³⁰ Dunes are also typically a shifting and changing landform. With rising sea levels and associated movement of the sea-land interface, even the Applicant's proposals to better protect the dunes (by increasing vegetative cover and/or through the construction of boardwalks), are unlikely to ensure their continued function. And even with their current function, the site is still under water in a 100-year storm, and such flooding is only expected to be exacerbated over time with rising sea levels.

With respect to the Applicant's proposal to mitigate flood risk through bringing in fill to raise the proposed facilities above flood elevation, not only is this inconsistent with LUP Policy 9.03, which prohibits all development in the flood plain, including fill designed to raise the elevation of structures, but it is reasonably expected to exacerbate flooding at surrounding properties (by displacing an area that flood waters would ordinarily inundate), increasing flooding risks on these surrounding properties, inconsistent with LUP Policies 9.01 and 9.02. This portion of the project is also inconsistent with LUP Policy 9.05 (requiring minimization of cut and fill, and requiring denial if other alternatives are available that result in less alteration) because the project could be carried out with less fill (see Alternatives Section below).³¹ For similar reasons, the proposed fill is inconsistent with LUP Policy 9.06, requiring development to fit the site topography and to keep grading "to an absolute minimum."

Finally, because the proposed project would site development in a 100-year floodplain when the LCP prohibits same to avoid such flood risk, the proposed project has not abated such hazards to an acceptable level of risk, and is inconsistent as well with IP Sections C.2.c.1.0 and C.2.c.2.0.

Thus, the proposed project would be located within the 100-year floodplain, inconsistent with LUP Policy 9.03. It would also be inconsistent with LUP Policies 9.01, 9.02, and 9.06, and IP Sections C.2.c.1.0 and C.2.c.2.0 due to its potential to flood at the proposed location.

Tsunami

According to the San Luis Obispo County Tsunami inundation zone map, the entire WWTP site

²⁸ The only exception provided in LUP Policy 9.03 is for when "off-setting improvements in accordance with the HUD regulations are required", and this reference is specific to residential development, not WWTP development.

²⁹ Note that the City's CDP approval did not even acknowledge Policy 9.03,

³⁰ Applicant's Response to Request for Additional Information (File No. SL-16578-SB).

³¹ Note that 35,000 cubic yards of fill are proposed for flood elevation purposes.

(including the footprint of the proposed new WWTP facilities) lies within the tsunami inundation zone.³² The elevation of the current WWTP site is 21 feet. The maximum tsunami flood elevations given a "distant worst case earthquake source" scenario would be 23.9 feet,³³ or 2.9 feet above the site elevation. Thus, the site would also be under water in a tsunami flood situation. Although there are likely measures that could be put in place to address tsunami risk of the order of magnitude identified (i.e., tsunami flooding of the site up to about 3 feet), such measures, such as the fill currently proposed, cannot themselves be found consistent with the LCP, as described above. As a result, tsunami risks cannot be minimized and the proposed project is inconsistent with LUP Policy 9.01 on this point.

Site Stability

The soils at the proposed project site are sandy and have been identified by the Applicant as having a high erosion potential.³⁴ Though the site is relatively flat, which tends to minimize the erosion potential, the proposed project would grade and add a significant new area of fill to the site. Such raised fill would be expected to direct eroding forces (such as floodwaters) off onto other areas, aggravating the potential for erosion of the areas that are not raised through fill. Such potential to increase erosion will only be exacerbated by sea-level rise and associated impacts. Siting new development in an area with soils that are at high risk for erosion, in addition to adding fill which may contribute to additional/aggravated erosion, is not consistent with LUP Policies 9.01 and 9.02.

Finally, the potential for liquefaction at the current WWTP site is moderate to high.³⁵ Seismic settling and lateral spreading are also potential concerns at the site. Although mitigation measures can be applied (and have been proposed as part of the project), such measures themselves would be located in the floodplain the same way that the fill area would be. These measures are prohibited in the floodplain for the same reasons. As a result, geologic risks cannot be minimized and the proposed project is inconsistent with LUP Policy 9.01.

Hazards Conclusion

The LCP explicitly prohibits development in the 100-year floodplain. The WWTP site is located within the 100-year floodplain, and the proposed project cannot be found consistent with LUP Policy 9.03. This is a fatal LCP inconsistency inasmuch as LUP Policy 9.03 is explicit as to its direction to avoid the floodplain. In addition, the proposed project, including its proposed hazard mitigations that are needed due to the project's location within a 100-year floodplain, cannot be found consistent with LUP Policies 9.01, 9.02, 9.05, and 9.06. It is also inconsistent with LUP Policy 9.06 requirements that require that "Areas of the site which are not suited to development because of known soil, geologic, flood, erosion or other hazards shall remain in project open space" because the proposed project would put new WWTP facilities in just such an area, and would not preserve these areas as open space. In short, the proposed project cannot be found consistent with the LCP's hazards policies.

³² Shoreline Erosion Study and 100-year Sea Wave Run-up Analysis, page 6.

³³ Per the California Emergency Management Agency.

³⁴ Fine-Screening Analysis, page 15.

³⁵ Fine-Screening Analysis, page 13.

D. PUBLIC ACCESS AND RECREATION

Applicable Policies

Per the Coastal Act, the standard of review for the approved project includes the public access and recreation policies of both the City's certified LCP as well as the Coastal Act. These policies require new development to maximize public access and protect oceanfront land for public access and recreation. Relevant policies include:

Coastal Act Section 30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Coastal Act Section 30211. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Coastal Act Section 30213. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred...

Coastal Act Section 30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Coastal Act Section 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Coastal Act Section 30253(e). New development shall do all of the following:...(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

LUP Policy 2.01. Lower-cost visitor and recreation facilities for persons and families of low or moderate income shall be protected, encouraged, and where feasible, provided. Developments providing public recreation opportunities are preferred.

The California Constitution³⁶ and the federal Coastal Zone Management Act³⁷ mandate the

³⁶ Section 4 of Article X of the California Constitution provides: "No individual, partnership, or corporation, claiming or possessing the frontage or tidal lands of a harbor, bay, inlet, estuary, or other navigable water in this State shall be permitted to exclude the right of way to such water whenever it is required for any public purpose, nor to destroy or obstruct the free navigation of such water; and the Legislature shall enact such laws as will give the most liberal construction to this provision, so that access to the navigable waters of this State shall be always attainable for the people thereof."

³⁷ The federal Coastal Zone Management Act requires its State partners to "exercise effectively [its] responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone" (16 U.S.C. Section 1452(2)) so as to provide for "public access to the coasts for recreational purposes." (Section 1452(2)(e))

protection and enhancement of public access to and along California's coastline. The Coastal Act and the City's certified LCP refine these requirements, including prioritizing public recreational use and development in areas along the shoreline such as this one. Coastal Act Section 30210 requires that public recreational opportunities be maximized,³⁸ and Section 30211 further requires that development not interfere with existing public access. Section 30221 protects oceanfront land such as the WWTP site for recreational use, and Section 30223 reserves upland areas necessary to support public recreational uses for such uses. Coastal Act Section 30213 and LCP Policy 2.01 require lower-cost visitor and recreation facilities to be protected, encouraged, and where feasible, provided. Section 30253 requires the protection of special communities that provide popular visitor destination points for recreational uses, such as the Morro Bay shoreline. In addition, the City has expressed an interest in improving and enhancing this view of the City. In other words, in addition to the public access and recreation policies that clearly require public access to be maximized, protected, and enhanced, the LCP also articulates a vision for the project site area where it transitions to a visitor serving corridor as an entrance to the City, providing a visitor's first view of the City. Highway 41, a major artery that visitors to the City of Morro Bay use to gain access to the city, enters the City before turning into Atascadero Road. When Embarcadero Road eventually links up to Highway 41/Atascadero in the future, it will create one continuous thoroughfare, allowing visitors to the City to link up to visitor-serving areas such as Morro Rock and the Embarcadero Area. Such visitors will drive right past the site of the proposed WWTP. Preserving or utilizing the proposed project site for visitor-serving and/or recreational use will maintain recreational uses along this important entrance to the City.

Public Access and Recreation Consistency Analysis

Background

The WWTP site is located just north of Morro Creek in the middle of a prime visitor destination, including public recreational access pursuits related to Morro Rock and the beaches and facilities located there and extending upcoast, as well as access to and along the Morro Bay Embarcadero with its bayside access walkways and the shops, restaurants, and overnight facilities that cater to coastal visitors. Morro Bay also offers recreational and commercial boating access, including at Morro Bay Harbor. The WWTP site is close to the Morro Rock/Coleman Park area, which is located just south of the WWTP site and just across Morro Creek. This is a prime area for pursuing active and passive recreational opportunities, including "surfing, fishing, boating, cycling, hiking and sightseeing".³⁹ The surf spot offshore is known as "the Pit", and is one of the most popular surfing locations in the Morro Bay area. Additionally the WWTP site is bordered to the west and the south by Morro Dunes RV park, a low-cost, visitor-serving use that provides overnight facility in close proximity to the prime Morro Rock and Embarcadero area visitor destinations. The WWTP area also includes two hotels and several restaurants within about 1,500 feet of the WWTP. There are currently three developed coastal access points located due

³⁸ Coastal Act Section 30210 direction to maximize access represents a different threshold than to simply provide or protect such access, and is fundamentally different from other like provisions in this respect. In other words, it is not enough to simply <u>provide</u> access to and along the coast, and not enough to simply <u>protect</u> access, rather such access must also be <u>maximized</u>. This terminology distinguishes the Coastal Act in certain respects, and provides fundamental direction with respect to projects along the California coast that raise public access issues, like this one.

³⁹ Fine-Screening Analysis, page 21.

west of the proposed project site: one to the north at Atascadero Road, one just south of Atascadero Road and one north of the Morro Creek outlet.⁴⁰ In addition, the confluence of Highway 1, running north and south, and the terminus of Highway 41, which runs from Yosemite National Park to Morro Bay, is approximately 1,000 feet from the WWTP site. Currently, coastal visitors are directed along a circuitous route from these highways to the main Embarcadero area, and there has long been a vision that the WWTP area could be both better connected to the Embarcadero and become a core visitor access corridor in the City. This vision has manifested itself in various forms, including the recently adopted Morro Bay Bicycle and Pedestrian Plan,⁴¹ one objective of which is to connect, by pedestrian and bike paths, the area surrounding the WWTP site to the Embarcadero, including to the Harbor Walk public recreational trail on the downcoast side of Morro Creek.⁴² Another is the recently adopted City goals for 2012/13, one of which is to "increase recreational opportunities of bike pathways and beach pathways"...including "to improve the connectivity between the bike paths at Atascadero Road" for which the City has applied for a grant.⁴³ This connection would not only connect the two sides of Morro Bay across the creek, but it would fill a gap in the local public shoreline access system and the California Coastal Trail (CCT) that is presently missing a crossing over Morro Creek.

In short, although the WWTP site itself does not currently provide any recreational opportunities, it is in an area with significant public recreational and visitor-serving uses and attractions, coastal access points, and a multitude of public visitor-serving recreational opportunities. This area has the potential to become a vital part of the coastal recreational use opportunities located up and down the almost 11 miles⁴⁴ of ocean and bayfront shoreline in the City of Morro Bay,⁴⁵ including in terms of the articulated City vision for the area that would find it meaningfully connected with the core visitor destinations of the Embarcadero.

Thus, it is important to consider the importance of this site for potential public recreational access and visitor-serving uses, when evaluating whether it is an appropriate site for a new WWTP facility. It is also important to keep in mind that tourism is the City's number 1 industry.⁴⁶ The LCP recognizes this and zones the site not only for light industrial uses, but with an overlay of planned development and interim use. The planned development overlay is intended "to provide for detailed and substantial analysis of development on parcels which, because of location, size or public ownership, warrant special review" such as this one.⁴⁷ The interim use overlay explicitly allows for uses other than the existing zoning in recognition of the

⁴⁰ Fine-Screening Analysis, page 22.

⁴¹ Approved by the Morro Bay City Council in February 2012 (and found at http://www.morrobay.ca.us/documents/Public%20Services/Engineering/Bicycle%20and%20Pedestrian%20Plan%20Adopt%202_28_12.PDF).

⁴² Approved by the Coastal Commission in 2006 (CDP 3-05-071).

⁴³ Approved by the Morro Bay City Council in May 2012.

⁴⁴ Fine-Screening Analysis, page 21.

⁴⁵ About half of that shoreline area located along the more urban area of shoreline from the north end of the Cloisters residential area to the Golf Course, and the other half extending along the Bay to Audubon Sweet Springs Nature Preserve.

⁴⁶ As stated in the adopted Morro Bay Bicycle and Pedestrian Plan (id).

⁴⁷ LCP Section 17.40.030.

higher priority of certain uses, including explicitly temporary visitor-serving or recreation uses "including but not limited to paths, R-V parks, camping facilities and ancillary uses for same, playground, exercise courses, restrooms, drinking fountains, sewage dump stations, and parking".⁴⁸ In short, consistent with Coastal Act priorities for use and development at such ocean-fronting sites located in prime visitor destinations, the LCP and Coastal Act require a thoughtful evaluation of both the way in which siting a WWTP project in this location impacts such surrounding access opportunities as well as the way in which committing the site to a lower priority use can be squared with the priorities and requirements of the LCP and the Coastal Act.

WWTP Impacts

The LCP and Coastal Act require preservation and protection of the already-existing lower-cost visitor serving and recreational opportunities surrounding the project site. Although the proposed development of the new WWTP facility would cluster facility development on the southern and eastern portions of the site, it includes a different solids handling process than the current WWTP, one that would produce biosolids with "potentially stronger odors than those currently produced and stored" at the site.⁴⁹ These biosolids would have to be removed from the proposed facility, requiring new truck trips to and from the site, estimated at 6 truck trips per day.⁵⁰ In addition, truck trips associated with recycled water use would also increase truck trips in the area. Further, construction is estimated to take 24 months,⁵¹ during which time the area would be impacted by construction traffic, noise, and associated activities. All of these project attributes will negatively impact existing public recreational access activities in the area to a certain degree, including intruding on the aesthetics, ambiance, and recreational utility of the beaches fronting the site. The existing RV park is likely to be most impacted due to it being directly adjacent to the WWTP site, thus disproportionately impacting lower-cost visitor serving overnight opportunities, but it is expected that all forms of access in the area will be negatively affected to one degree or another by the project. Such impacts can be reduced through proper project design and construction BMPs, but they cannot be eliminated at this site given its location relative to public recreational use and visitor-serving destination areas. Thus, due to the proposed location of this project, it conflicts with Coastal Act Sections 30210, 30211, 30213, and 30253, and LUP Policy 2.01 in terms of protecting and not interfering with public access, including explicitly lower cost visitor recreational facilities such as the adjacent RV park.

Opportunity Costs

Perhaps even more critical, particularly in light of the coastal hazard policies that prohibit development of the WWTP project at this site (see previous finding), is the opportunity cost associated with recommitting the site to significant industrial use when the Coastal Act and LCP would direct public access and recreational uses be developed in this oceanfront location. As discussed above, the Coastal Act and LCP clearly direct that upland and ocean-fronting properties like this be protected for visitor-serving commercial and public recreational use and development. In addition, at this site, given its location within an area envisioned for meaningful

⁴⁸ LCP Section 17.40.080.

⁴⁹ Fine-Screening Analysis, page 22.

⁵⁰ Fine-Screening Analysis, page 22.

⁵¹ Fine-Screening Analysis, page 51.

connection to the Embarcadero (and thus creating a continuous public access shoreline and CCT trail system through Morro Bay), including as articulated by the City's vision for same, its promise, prominence, and relevance in terms of the application of these core LCP and Coastal Act policies are only heightened.

The location of this site adjacent to existing recreational, visitor-serving uses, clearly presents opportunities to coordinate use of this site with other surrounding and nearby uses that combine to make the Morro Bay shoreline such a prime visitor destination. Given that the proposed project is to construct an entirely new WWTP, rather than attempting to keep the existing plant, it is important to evaluate whether use of such site for a WWTP is appropriate given LCP and Coastal Act protections of recreational access along the shore. The priority for use and development at this site, including in terms of local and regional long-term visions for redevelopment over time, is geared towards developing recreational and visitor-serving uses at this special location, and connecting such amenities across Morro Creek. Constructing a new WWTP at this location conflicts with these LCP and Coastal Act directives, including the vision that the project site area transition into a visitor-serving corridor, providing a key connection and recreational/visitor-serving enhancement to the way in which residents and visitors use and view the City and its shoreline.

Moreover, constructing a new WWTP at the existing site will have other indirect impacts, including committing this site to industrial use for the foreseeable future, which will limit consideration of other potential public recreational access and visitor-serving improvements in the area. In other words, such a commitment to siting a WWTP here would reduce both the potential for such nearby improvements, as well as their value and utility overall (because they would be sited in an area committed to ongoing industrial use, as exemplified by a new WWTP, as opposed to an area that is redeveloping as a connecting visitor and recreational corridor along the Morro Bay shoreline).

Thus, the proposed project conflicts with Coastal Act Sections 30221, 30233, and 30253 and the LCP because it does not protect the site, and by extension the surrounding area, for visitor-serving and public recreational access use and development, as required by these sections.

Public Access and Recreation Conclusion

The LCP and Coastal Act require preservation and protection of existing lower-cost, visitor serving and public recreational opportunities surrounding the project site, and protect ocean-fronting sites, like the proposed project site, for visitor-serving and public recreational access use and development. The project would negatively impact surrounding public recreational access and visitor-serving facilities, amenities, and opportunities inconsistent with these requirements. In addition, by siting the proposed project here, it would preclude the City from exploring high priority uses, including the potential for this area to provide a meaningful link and connection within the City's shoreline area and the potential to use this area to close a gap in the CCT at Morro Creek. While the LCP hazard policies discussed above prohibit development at this site (see previous finding), an LCP amendment could be crafted to provide for public, visitor-serving and recreational use and development that could readily be removed if threatened, as opposed to significant brick and mortar public infrastructure (like the \$30 million WWTP) that would be significantly more difficult to address without shoreline alteration and armoring in the face of the same threats. In short, the

proposed project cannot be found consistent with the Coastal Act and LCP public access and recreation policies as cited and described in this finding.

E. VISUAL RESOURCES

Applicable Policies

The LCP requires development to minimize visual impacts and protects public views to and along the shoreline. The LCP states:

LUP Policy 12.01. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic and coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas...

LUP Policy 12.02. *Permitted development shall be sited and designed to protect views to and along the coast and designated scenic areas and shall be visually compatible with the surrounding areas...*

Visual Resources Consistency Analysis

The LCP requires the scenic and visual qualities of the coast to be protected and requires development to be sited and designed to protect views to and along the ocean and other coastal areas. It specifically identifies scenic and visual qualities as "resource of public importance ". The project involves constructing a new WWTP immediately adjacent to multiple areas that are used by the public for access and recreation at and along the coast (see previous finding on this point). The site is located on Atascadero Road, which is shown in LCP Figure 30 as a street providing scenic views. In addition, views from the dunes looking inland across the site include mountain ridgelines and views from the road looking towards the coast across the site include Morro Rock. The site is also visible from Highway 1. The proposed development at this location would obstruct and degrade these important public views.

The existing WWTP already impacts such public views, however, the new proposed WWTP would lead to additional view impacts due to the fact that it would be larger and taller than the existing plant, and it would be elevated above flood levels (as previously described). As such, the proposed project leads to new impacts above and beyond those associated with the existing WWTP. In addition, and as described in the previous finding, the LCP and Coastal Act direct that the site be used for public recreational access and visitor-serving use and development. Such development could also be sited and designed in such a way as to restore and enhance visual resources at this location, whereas the new proposed WWTP will not. In short, the proposed project will degrade, as opposed to enhancing, the shoreline viewshed, inconsistent with the LCP.

Because the proposed development would be inconsistent with the LCP policies that require that the viewshed "be considered and protected as a resource of public importance", and that aim to not only protect views to and along the scenic ocean and coastal areas, but to also restore and

enhance them, the project cannot be approved at the current location.

Visual Resources Conclusion

The WWTP site is located in an LCP-designated sensitive view area between Highway 1 and Morro Rock. The LCP requires the scenic and visual qualities of the coast to be protected and where feasible enhanced, and requires development to be sited and designed to protect views to and along the ocean and other coastal areas, to be visually compatible, and where feasible to restore and enhance visual quality. The new WWTP would be in a similar location as the plant to be demolished, but would be larger and taller, including to be elevated above flood levels, degrading, as opposed to enhancing, the shoreline viewshed, inconsistent with the LCP policies cited and described in this finding.

F. WATER RECLAMATION AND BIOLOGICAL RESOURCES

Applicable Policies

The LCP requires water reclamation to be a part of any upgraded WWTP, requires water supply to be protected for priority uses, and requires the quantity of water in the Morro and Chorro groundwater basins to be enhanced where feasible. Taken together, these policies require this project to include a meaningful wastewater reclamation program. Relevant LCP policies include:

LUP Policy 3.08(5). Even with delivery of State Water, use of reclaimed water is the City's second highest priority and remains a productive source of potential conservation for both large and small scale projects, respectively, and as a result, should be pursued when funded by a potential user, required as part of a wastewater plant upgrade or permit condition or when it is shown as cost effective for City use. Staff is further directed to pursue small scale projects as both internal and external funding sources are made available.

LUP Policy 3.04... A Water Management Plan shall ensure at a minimum, the following: (1) An adequate water supply for coastal-dependent activities such as commercial fishing, oyster farming, fish and shellfish processing, recreation boating and fishing and industrial energy development...

LUP Policy 11.17. The biological productivity of the City's environmentally sensitive habitat areas shall be maintained and, where feasible, restored through maintenance and enhancement of the quantity and quality of Morro and Chorro groundwater basins and through prevention of interference with surface water flow. Stream flows adequate to maintain riparian and fisheries habitat shall be protected.

LUP Policy 6.06. The City shall participate in the efforts of the coastal Conservancy or other public or private agencies to implement agricultural enhancement programs. These programs may include but are not limited to... (4) Assistance programs (water subsidies, recycling methods...)

Pursuant to LUP Policy 3.08(5), the LCP requires the Applicant to pursue water reclamation as part of this WWTP project. Furthermore, maximum reuse of reclaimed water would help the City

meet its water supply needs and ensure water supply is available for priority uses as required by the LCP, especially if/when State Water is restricted or unavailable. Properly treated reclaimed water could be used for many beneficial purposes, including agricultural irrigation inside and/or outside of the district's service area, injection wells to maintain and enhance the water quality and biological resources associated with the Chorro and Morro groundwater basins (including as required by LUP Policy 11.17), and for residential and municipal landscaping, among other uses. LUP Policy 6.06 encourages the City to support agricultural assistance programs, including through water subsidies and recycling methods. In addition, LUP Policy 11.17 requires ESHA to be maintained and where feasible, restored and enhanced, including through assuring adequate quantity and quality of water in the Morro and Chorro groundwater basins. In short, the LCP requires that the new WWTP provide for a meaningful reclaimed water component because the LCP requires: (1) water reclamation to be a part of the WWTP upgrade; (2) water supply to be protected for priority uses; (3) the quantity of water in the Morro and Chorro groundwater basins to be enhanced where feasible; and (4) the City to participate in agricultural enhancement programs (including recycling water). As explained below, the proposed site of the WWTP makes accomplishing these goals more difficult than it would be if the WWTP were in a different location.

Water Reclamation and Biological Resources Consistency Analysis

Water Supply Background

The City of Morro Bay has a storied water supply history that goes from primarily relying on Morro and Chorro Creek groundwater aquifer extractions to the point of overdraft during long-term drought periods or when alternative water sources experience shortages, ⁵² to building a desalinization plant in the early 1990s, ⁵³ to finally relying heavily on State Water Project water for its municipal supply. ⁵⁴ Currently the City contracts for 1,300 acre-feet per year (afy) of State Water, extracts some 1,700 afy from the Chorro and Morro groundwater basins, and produces an additional 645 afy in its desalinization plant. The City estimates that its current municipal demand is 1,250 afy, down from 1,625 – 1,800 afy historically due to successful conservation strategies. ⁵⁵ The City indicates that Morro Bay's water supply is reliable and trustworthy.

Groundwater Supplies

In light of resource issues associated with City draw-downs in the Chorro and Morro groundwater basins, the California State Water Resources Control Board (SWRCB) issued Decision 1633 in 1995. Decision 1633 includes a Water Management Plan for the City that established priorities for the City's long-term water supply. The Water Management Plan's

⁵² For example, during the 1995 drought and the 2009 State Water Project shutdown (2010 Morro Bay Urban Water Management Plan, page 10).

⁵³ The City's desalinization plant was originally approved in 1993 during a drought emergency through an expedited permit process. The City uses the plant to augment State Water deliveries during peak demand times and other types of shortages. The plant had to be shut down after a few months of operation because of excessive costs. In addition, the permit was a temporary CDP that expired 5 years after it was approved. As a result, the desalinization plant, and any use of it, is currently unpermitted. The City is aware of this issue, and intends to submit a new CDP application in the near term. However, for the purposes of water supply analysis, water from the desalinization plant cannot be factored into this analysis, as it is speculative unless and until appropriately permitted.

⁵⁴ 2005 Morro Bay Urban Water Management Plan, page 33; City of Morro Bay Water Allocation History, page 1-3.

⁵⁵ Recycled Water Feasibility Study, page 11.

number one priority is conservation, and the number two priority is reclamation and use of recycled water. Decision 1633 also established that to maintain public trust resources such as habitat for important species like steelhead trout, tidewater goby and red-legged tree frog, minimum stream flows of 1.4 cubic feet per second (cfs) are necessary.⁵⁶ To assure that overpumping of wells does not deplete this minimum stream flow requirement, SWRCB Decision 1633 required monitoring of stream flows with stream gauges.⁵⁷ To date, no permanent flow monitoring equipment has been installed, and although the City relies on biweekly monitoring of stream flows to justify to pumping, continuous data is not available at the current time to ensure that such requirements are maintained at all times for purposes of water budgeting.⁵⁸

The Morro Valley Groundwater Basin has been estimated to have a safe yield of 1,500 acre feet per year (afy).⁵⁹ Seawater intrusion and nitrate contamination are the predominant concerns for this groundwater basin. Additionally, since this basin is a shallow alluvial basin, it is more susceptible to drought impacts. In addition, the SWRCB has issued appropriative rights permits that limit the yield in this basin.⁶⁰ The City currently draws from four of the seven available Morro wells, the other three are physically disconnected from the system and inactive. The Morro Wells were taken out of service in 2000 after a methyl tertiary butyl ether (MBTE) contamination from fuel storage tank leakage was discovered and this issue was not completely resolved until 2008.⁶¹

The Chorro Valley Groundwater Basin has been estimated to have a safe yield of 2,210 afy.⁶² Intrusion occurs in this basin seasonally or in wells that are influenced by wastewater treatment plant discharges to Chorro Creek. The water quality of the Chorro basin is also affected by nitrate contamination, including from agricultural sources.⁶³ The City is only able to draw from one of the eight Chorro wells currently and most of the Chorro wells are currently inactive due to nitrate problems and water quality concerns.⁶⁴

Lacking permanent flow monitoring gauges, there is no conclusive way to tell if the pumping of Morro and Chorro groundwater is fully in compliance with SWRCB Decision 1633 and that stream flows necessary to protect public resources, such as sensitive species habitat, are being maintained. Although the City's ad-hoc biweekly monitoring provides some data, it is not continuous data, and thus cannot be relied on ultimately for such conclusions. Further, the history and data appear to show that the reliability of the wells in these groundwater basins is

⁵⁶ State Water Resources Control Board Decision 1633, pages 22-24.

⁵⁷ State Water Resources Control Board Decision 1633, page 22

⁵⁸ 2010 Morro Bay Urban Water Management Plan, page 8.

⁵⁹ San Luis Obispo County Water Master Water Plan, page 18.

 ⁶⁰ 2010 Morro Bay Urban Water Management Plan, page 7; San Luis Obispo County County Water Master Water Plan, page 18.

⁶¹ 2010 Morro Bay Urban Water Management Plan, pages 7-8.

⁶² San Luis Obispo County Water Master Water Plan, page 18.

 ⁶³ 2010 Morro Bay Urban Water Management Plan, page 7; San Luis Obispo County County Water Master Water Plan, page 19.

⁶⁴ Rob Schultz' City of Morro Bay Water History Memo, page 3; 2010 Morro Bay Urban Water Management Plan, page 8.

unpredictable at best, including given the many instances of contamination and/or intrusion from various sources over time.

Desalinization Supplies

The City of Morro Bay also relies on a desalinization plant for some of its water supplies. This plant was originally constructed for the sole purpose of emergency drought preparation, and, as indicated above, the current use of this plant is unpermitted. Issues identified when the plant is in operation are related to its reliability and the expense. In fact, the plant was shut down after its first several months of operation due to high operating costs, and again in 1995 because of water quality problems.⁶⁵ The plant, even now, offers only limited reliability due to pretreatment clogging from iron.⁶⁶ In short, desalinization is a relatively expensive and at times unreliable source of water for the City. In addition, the plant is currently unpermitted, and thus for the purposes of water supply analysis, water from the desalinization plant cannot be factored in as it is speculative unless and until appropriately permitted.

State Water Supplies

Finally, the City relies heavily on State Water supplies. The California State Water Project has long been controversial in some quarters, including because resource impacts are concentrated at the points of extraction, while the benefits of the water are realized by water users far way. This is the opposite of a local sustainable water supply, and it is not clear that such a program can ultimately meet the State's water supply needs in a way that appropriately protects resources, including as the State's population continues to grow. In addition, State Water is not controlled by local communities, but rather its provision is controlled by the State, which can shut off supply unilaterally.⁶⁷ State Water Project water can also be unilaterally suspended, reduced, or otherwise impacted (e.g., increase in costs, etc.). Given a drought or other uncontrollable environmental conditions "at the SWP point of diversion, projected deliveries have been as low as 5 percent of allocated water."⁶⁸ In this instance, the City would need to purchase a huge drought buffer to take the full allotment which at this time "would not be economically feasible for the community... and also may not be cost effective in terms of the enhancement to reliability that it provides."⁶⁹ State Water Project and reclamation would provide an important contingency in the event that such water transfers are suspended, reduced, or otherwise impacted (e.g., increase in costs, etc.)

Conclusion

In short, it appears that there is some question as to whether the City's water supply is as reliable and trustworthy as the City contends.

⁶⁵ 2010 Morro Bay Urban Water Management Plan, page 4.

⁶⁶ 2010 Morro Bay Urban Water Management Plan, page 10.

⁶⁷ As nearly occurred in Morro Bay over the Labor Day weekend of 2011, when the City nearly had to turn to inactive and nitrate impacted Chorro wells due to a State Water delivery issue that was only rectified at the very last minute (Personal Communication, Rob Livick, Public Services Director, City of Morro Bay, June 22, 2012).

⁶⁸ 2010 Morro Bay Urban Water Management Plan, page 15.

⁶⁹ 2010 Morro Bay Urban Water Management Plan, page 15.

Recycled Water Feasibility Study

The Applicant developed a Recycled Water Feasibility Study as directed by the Commission in March 2011. In that study, the Applicant concludes that the City of Morro Bay has an adequate and reliable water supply, even in drought years, through the use of State Water, seawater desalination and brackish water desalination, and it therefore concludes that it need not pursue use of recycled water with the WWTP project.⁷⁰ The Applicant's conclusion is based on both State Water and City desalination plant water being both reliable and available. On the former, it is fair to say that the City has a contract for State Water, but it seems equally fair to say the long-term sustainable future of that supply is uncertain. On the latter, the City desalination plant water cannot be applied towards such water supply analysis as it is currently unpermitted. In addition, both State Water and desalinized water are expensive, and desalinization takes a lot of energy to produce, further reducing its effectiveness as a source. The City's groundwater wells are at times inundated with seawater and have been subject to contamination by both methyl tertiary butyl ether and nitrates.⁷¹

In short, there appears to be more uncertainty than not in terms of the City's conclusion that it does not need to pursue recycled water because "the City has no water supply concerns", ⁷² particularly when contingency planning for worst case scenarios are applied (e.g., suspension of State Water, no desalinization, etc.) and intensified use of local groundwater basins are the last resort. As indicated above, the City turned to State Water and desalinization after their Morro and Chorro Creek aquifer extractions led to near overdraft of these resources throughout times of drought in the area.⁷³ Current monitoring is not complete and thus cannot conclusively demonstrate minimum stream flows are always being maintained, and these resources suffer from nitrate issues currently.⁷⁴ A return to such a situation would further exacerbate such issues and degrade such resources, as well as other freshwater systems that rely on them (like Morro and Chorro Creek, etc.). In addition, others who use water from the groundwater basins, like agricultural operators, would also be relying on the same sources, again further exacerbating any such problems.

In any case, regardless of whether the Applicant has accurately assessed the City's need for recycled water in the future, the LCP nevertheless identifies reclaimed water as the City's second-highest priority and requires that recycled water be an element of a WWTP project (see LUP Policy 3.08(5)).

The City's evaluation of the potential use of recycled wastewater from the WWTP is somewhat skewed given its reliance on a finding that there is no water supply issue in the City, and thus that there no need for recycled water to offset such supplies (i.e., through use for agriculture and landscaping). With this context, the City concluded that the use of 0.4 million gallons per day (mgd) (of the potential 1.5 mgd that could be produced) of recycled water to be produced and made available (via truck filling station at the WWTP) as a part of the proposed project was

⁷⁰ Recycled Water Feasibility Study, page 90.

⁷¹ 2005 Urban Water Management Plan, page 33.

⁷² Recycled Water Feasibility Study, page ES-5.

⁷³ 2005 Urban Water Management Plan, page 33.

⁷⁴ 2005 Urban Water Management Plan, page 33.

sufficient to meet LCP requirements that the project include reclamation. However, should the water supply conclusion change, so would the recycled water conclusion. For example, the Applicant concludes that most of the potential uses for this recycled water are not feasible because of varying reasons (ranging from no enthusiasm for the water from potential users, to logistical concerns, to the concern that the water will be too expensive to move off site to the potential users). However, these arguments have been raised and resolved in many other recycled water cases, it is clear that they are not insurmountable here, and they are inappropriately relied on as fatal flaws. Moreover, given that the LCP identifies recycled water as the City's second-highest priority, it does not appear that siting the WWTP in such a location that recycled water would all need to be trucked from the site, such that only one-third of its recycled water capacity could be used, is consistent with the LCP.

In addition, the Applicant's determination of what volume of recycled water should be produced was based, in part, on a conclusion that most of the potential uses for this recycled water are not feasible, including because it will be too expensive to move such recycled water off-site to the potential users. If the WWTP is located closer to potential users, then more recycled water could be used. And, if the Applicant's optimistic predictions regarding the adequacy of existing water supplies do not hold up over time, then siting the WWTP in such a location that recycled water can more readily be made available to potential users can help address such water supply issues in the future, including in terms of local sustainability and control.

If the water supply baseline is not as certain as predicted, then the degree to which users would be interested in making the most out of the treated wastewater would be expected to change as well. One need look no further than the recently approved wastewater treatment system in nearby Los Osos (about 7.5 miles way) where the Commission required that all of the wastewater effluent be reclaimed, recycled, and reused to offset potable water use and enhance groundwater resources in that nearby community.⁷⁵

The Applicant does conclude that reuse of the recycled water in the agricultural corridor offers the largest potential use of recycled water, about 500 afy. However, the applicant rules out this potential reuse of the recycled water because the water will be costly to produce and there will be nutrient constraints of the treated water.⁷⁶ The Applicant goes on to state that farmers in the agricultural corridor of Morro Bay are, in fact, interested in using recycled water, but that cost is a major constraint. Costs of such water would be reduced if the WWTP were located closer to the agricultural corridor. In addition, cost recovery is not always the main or only concern with making such recycled water available, particularly in scenarios where there are competing users for a finite water supply for which extractions are leading to resource impacts and concerns.

Finally, outside of the City's water supply issues, the Applicant indicates that recycled water provisions do not need to be maximized with the proposed WWTP because it already has a viable means of disposing of its treated water because it can continue to use the ocean discharge pipe. Although it is clear that all wastewater treatment systems need a "fail safe" disposal option for treated effluent, it is not clear that an ocean outfall is necessary today, in light of current technology. This was demonstrated in the Commission's approval of a wastewater treatment

⁷⁵ CDP A-3-SLO-09-055/069, approved June 11, 2010.

⁷⁶ Recycled Water Feasibility Study, page 90.

plant in Los Osos, where 100% of the treated water will be reused, and no ocean outfall was required. Given the environmental impacts of such ocean outfalls, and LCP and Coastal Act requirements to protect marine resources, the Applicant should site the new WWTP in a location where more of the treated water can be recycled so that less of it need be disposed of in the ocean.

In summary, the development of new wastewater facilities offers an opportunity to the City of Morro Bay, much like the permitted development of a new wastewater facility in Los Osos. If the project is done correctly and in a well-thought out, deliberate manner, considering all the opportunities to lessen the City's dependence on expensive, outdated and unreliable water sources, the project will be better for the City in the long run, including in terms of promoting local sustainability and control. There still exists the potential to revise the plan for this WWTP, incorporating a meaningful water reclamation program similar (but not identical) to Los Osos. A newly devised plan for a WWTP that incorporated meaningful water reclamation and recycling would help conserve water in situ for habitat protection of sensitive species and bring the project into further compliance with LCP policies that beg that water reclamation be a priority for the City.

Water Reclamation and Biological Resources Conclusion

The proposed WWTP is a major public works project and investment in community infrastructure that relies heavily on a conclusion that water supplies are stable, though the City's water supply has many constraints that range from availability and reliability of State Water, the use of an unpermitted, expensive desalinization plant, the overuse and contamination of the Morro and Chorro groundwater aquifers and the threats to stream levels in the groundwater basin's associated with Morro and Chorro Creeks. Regardless of the questions regarding the Applicant's conclusions regarding water availability, the LCP identifies use of recycled water as the City's second highest priority, it requires recycled use as part of a new WWTP, and use of such recycled water could benefit ESHA and biological resources and reduce the adverse impacts of the project on marine resources, by reducing, or possibly eliminating, the project's reliance on an ocean outfall. Given that the project as sited and designed fails to meet these goals, it is inconsistent with LUP policies 3.08(5), 6.06 and 11.17.

G. ARCHEOLOGY

Applicable Policies

The LCP also includes strong protections for archaeological resources. The key LCP policies state:

LUP Policy 4.01. Where necessary significant archeological and historic resources shall be preserved to the greatest extent possible both on public and privately held lands.

LUP Policy 4.07. All available measures, including purchases, tax relief, purchase of development rights, etc. shall be explored to avoid development on significant archaeological sites...

The LCP demands that if significant archeological or historical resources are present they shall

be preserved to the greatest extent possible and that available measures be explored (such as tax relief, purchase of development rights, etc.) to avoid development on such sites.

The project site is located in close proximity to numerous documented archaeological sites and is located on top of a significant burial ground of the Salinan Tribe. The new WWTP requires significant ground disturbance and excavation at this sensitive location, and would cover a large area with significant WWTP facilities, increasing the potential threat to such sensitive archeological resources.

The proposed WWTP site was surveyed for potential archaeological or historical resources within the site or vicinity. No resources were found at the site but there is potential "for intact portions of buried sites below existing infrastructure."⁷⁷ Proposed mitigation measures, given the occurrence of finding such resources consist of developing a mitigation monitoring plan and ceasing construction work if such resources are found.⁷⁸

This proposed aspect of the project brings the development into compliance with the applicable LCP policies cited above.

H. CDP DETERMINATION CONCLUSION

As discussed in the above findings, the proposed project is inconsistent with the LCP and the access and recreation policies of the Coastal Act. When the Commission reviews a proposed project that is inconsistent with the Coastal Act and LCP, there are several options available to it. In many cases, the Commission will approve the project but impose reasonable terms and conditions to bring the project into conformance with the LCP and Coastal Act. In other cases, the range of possible changes is so significant as to make conditioned approval infeasible. In these situations, the Commission will frequently deny the project and provide guidance to applicants on the type of development changes that must be made for Coastal Act and LCP conformance. These denials are without prejudice inasmuch as applicants are given direction on what they need to do to propose an alternative project that can meet the applicable policies. In rare cases, there are no feasible conditions that could bring the project into conformance with the Coastal Act, and there are no obvious feasible alternatives consistent with the Coastal Act that the Commission might suggest to an applicant. When this happens, the Commission might deny the project without further guidance to the applicant at that stage, or it might consider approval of a different project that is the minimum necessary to avoid a taking of private property without just compensation.

Denial with Direction

In this case, the proposed location of the project is inappropriate and results in a project that does not meet Coastal Act and LCP requirements, as described in the preceding findings. For example, the project cannot be approved at the proposed site consistent with the LCP hazards policies. As a result, there are no modifications available that can make the project Coastal Act

⁷⁷ Fine-Screen Analysis, page 39

⁷⁸ Fine-Screen Analysis, page 39

and LCP consistent unless it is moved out of the 100-year floodplain. The Applicant was asked to evaluate alternative sites in addition to the existing WWTP site, and ultimately identified two reasonable alternative site candidates: the Chevron site and the Righetti site.

Of the two alternatives, the Chevron site is the less LCP-compatible alternative than the Righetti site. There are significant hazards at this site, including a high landslide potential throughout the site and significant geotechnical mitigation would be required for the proposed development. The site is also highly visible from Highway 1, although there are possibly siting and design options that could be applied to address such concerns. It is also highly constrained by the potential ESHA impacts because the area is designated critical habitat for steelhead and red-legged frog, both federally listed protected species. Toro Creek, which runs along the northern edge of the property, is also potential habitat for the listed species tidewater goby. Finally, the beneficial reuse of reclaimed water would be highly constrained at this location because it is remotely located from all potential service areas.

The Righetti alternative site appears to provide the best potential site of those evaluated for a new WWTP. The Applicant's analysis identified minimal potential for hazards and ESHA impacts at this site. It is also located inland in an area where it would not be expected to impact public recreational access and there appears to be ample space to site the WWTP in ways that would not impact public views. The site is agricultural land, which presents some concerns in terms of agricultural conversion, but it is also located in the County where such conversion is contemplated for public facilities like this where it is the least environmentally damaging feasible site (in the same way that the Los Osos WWTP was ultimately sited on agricultural lands). The potential for water reclamation/reuse is very high at this site, given its location in the agricultural service area, where the most potential for this reuse exists. On this point, the Applicant indicates that because the primary interest in use of recycled water lies with farmers in the Highway 41 agricultural corridor adjacent to the City of Morro Bay, siting the plant close to these potential agricultural uses would reduce costs for the reuse of treated water. The Righetti property is "surrounded by cropland to the south".⁷⁹ Delivery of recycled water to the Highway 41 agricultural corridor from this alternative site would be around \$500 cheaper per acre foot than delivery from the proposed WWTP site (\$2,600/af versus \$3,100/af, respectively).⁸⁰

Parts of the Righetti property have significant slopes (up to 15 percent grade) but that slope levels out more toward the southern end of the property, toward Highway 41. The development envelope of a new wastewater treatment facility on this site would likely be at the southernmost end, just north of Atascadero Road, according to the alternatives analysis.⁸¹ Siting this development as so would be entirely out of the flood zones, away from any potential sites of archeological significance, away from riparian vegetation buffers and in an area of relatively gentle slope (see Exhibits 2 and 5 for the Applicant's conceptual site plans and photos of Alternative Sites).^{82,83}

⁷⁹ Fine-Screen Analysis, page 113.

⁸⁰ Fine-Screen Analysis, pages 75 and 133.

⁸¹ Fine-Screen Analysis, pages 113.

⁸² Fine-Screen Analysis, pages 113.

The Righetti property is situated in an area that is largely hilly terrain and visual open space.⁸⁴ The proposed development of the new facilities at this site would have "largely the same footprint and location as the existing residential development on the site, immediately adjacent to Highway 41," which is a scenic corridor in the County's LCP.⁸⁵ Visual impacts at this site would be present considering its location in a scenic corridor but could be minimized by siting the development as recommended at a pad elevation of 77 feet so that it is in line with the Highway 41 frontage, using materials to help the facilities blend into the present setting and the use of fencing and/or landscaping for screening purposes.⁸⁶ Additionally, visual impacts could be minimized by situating deeper structures such as oxidation ditches and clarifiers in the middle of the site, out of the visual line of site; while buildings and other such structures can be situated above the grade. In addition, as was approved for the Lo Osos WWTP, any visible structures and related elements can be made to emulate and evoke agricultural structures and development so as to 'hide in plain sight" and allay visual concerns. Again, final siting and design would require more thorough analysis, but the current analysis provides a appropriate basis for comparison of this site.

There are not significant flood hazards at the Righetti site as it is out of the 100-year floodplain, FEMA flood and tsunami inundation zones.⁸⁷ There are no real liquefaction risks and only minimal potential for seismic activity at the Righetti site.⁸⁸ Though there is high potential for landslides at this site, developing the wastewater treatment facility in the gently sloping areas in the southern portion of the site should greatly diminish this potential.⁸⁹

Per the Applicant's estimates and based on the assumptions provided in the Fine-Screening analysis, moving the WWTP to the Righetti site would increase project costs by \$24.7 million.⁹⁰ That difference shrinks to \$19.6 million when the actual recent property value of the Righetti site is taken into account (it is on the market for \$2.4 million when the analysis identifies a property acquisition cost of \$7.5 million).⁹¹ Further, it is unclear what "soft costs" constitute and why "soft costs" would be up to \$5.5 million more at the Righetti site as opposed to the current site.⁹² The expense of moving to an alternative site, as opposed to leaving the wastewater treatment plant at the current location, diminishes to negligible when the potential opportunity costs of the current site are realized. These sorts of opportunity costs include, but are by no means limited to,

- ⁸⁶ Fine-Screen Analysis, pages 113 and 126.
- ⁸⁷ Fine-Screen Analysis, pages 117.
- ⁸⁸ Fine-Screen Analysis, pages 117.
- ⁸⁹ Fine-Screen Analysis, pages 118.
- ⁹⁰ Total Capital costs + Soft costs + Property Acquisition costs = \$37 million at current site and \$61.7 million at Righetti. See Exhibit 5 for costs breakdown.
- ⁹¹ Fine Screen Analysis, page 167; http://www.century21.com/property/887-atascadero-road-morro-bay-ca-93442-C2137354459?k=1.
- ⁹² Fine-Screen Analysis, page 167.

⁸³ Of course, the site would have to be thoroughly evaluated to ensure that this was the most appropriate location, but it provides a appropriate basis for comparison.

⁸⁴ Fine-Screen Analysis, pages 126.

⁸⁵ Fine-Screen Analysis, pages 126.

add backs from the current site's value (\$4-9 million), the revenue potential of developing tourist attracting and visitor-serving uses at the current site, recycled water revenue potential (higher at Righetti due to its proximity to the agricultural users), and the avoidance of costs due to hazards at the current site and the future expansion potential of the Righetti site to accommodate new wastewater treatment technologies.

Because the Righetti site is located in unincorporated San Luis Obispo County (and just outside City limits), it will require County authorization, and thus cannot be approved under this current appeal/de novo hearing process. In recognition of this, Commission staff has coordinated with the County and has discussed measures to allow for a streamlined review, including a consolidated CDP application directly to the Commission. Staff has also coordinated with the RWQCB. The Righetti site is currently on the market.

Conclusion

A WWTP project is needed to address ongoing coastal resource impacts and to comply with the RWQCB Order, but a project at the existing WWTP site cannot be found consistent with the LCP and the Coastal Act. The Commission therefore denies the CDP application. The Applicant's alternatives analysis indicates that a WWTP project can be constructed at the Righetti site, where it will avoid the siting issues presented by the current site. It appears that such a project can be found consistent with the San Luis Obispo County LCP and the Coastal Act, and the Applicant is directed to consider pursuing a WWTP project at the Righetti site.

I. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Public Resources Code (CEQA) Section 21080(b)(5) and Sections 15270(a) and 15042 (CEQA Guidelines) of Title 14 of the California Code of Regulations (14 CCR) state in applicable part:

CEQA Guidelines (14 CCR) Section 15042. Authority to Disapprove Projects. [Relevant Portion.] A public agency may disapprove a project if necessary in order to avoid one or more significant effects on the environment that would occur if the project were approved as proposed.

Public Resources Code (CEQA) Section 21080(b)(5). Division Application and Nonapplication. ...(b) This division does not apply to any of the following activities: ...(5) Projects which a public agency rejects or disapproves.

CEQA Guidelines (14 CCR) Section 15270(a). Projects Which are Disapproved. (a) CEQA does not apply to projects which a public agency rejects or disapproves.

Section 13096 (14 CCR) requires that a specific finding be made in conjunction with coastal development permit applications about the consistency of the application with any applicable requirements of CEQA. This report has discussed the relevant coastal resource issues with the proposed project. All public comments received to date have been addressed in the findings above. All above findings are incorporated herein in their entirety by reference. As detailed in the findings above, the proposed project would have significant adverse effects on the environment as that term is understood in a CEQA context.

Pursuant to CEQA Guidelines (14 CCR) Section 15042 "a public agency may disapprove a project if necessary in order to avoid one or more significant effects on the environment that would occur if the project were approved as proposed." Section 21080(b)(5) of the CEQA, as implemented by Section 15270 of the CEQA Guidelines, provides that CEQA does not apply to projects which a public agency rejects or disapproves. The Commission finds that denial, for the reasons stated in these findings, is necessary to avoid the significant effects on coastal resources that would occur if the project was approved as proposed. Accordingly, the Commission's denial of the project represents an action to which CEQA, and all requirements contained therein that might otherwise apply to regulatory actions by the Commission, do not apply.

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

SI Findings

Rough Screening

Fine Screening

Recycled Water Feasibility Analysis

Flood Hazard Analysis

EIR


Exhibit 1 . A-3-MRB-11-001 1 of 1



Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013
Figure 2-1
Project Vicinity

SOURCE: GlobeXplorer; ESA, 2010



2 of 8



Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013 Figure ES-1 Project Location

SOURCE: MWH, 2010.



Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure 2-3 Site Layout, Visual Simulation Looking East

SOURCE: RRM Design Group, 2010

Exhibit 2 A-3-MRB-11-001 4 of 8



SOURCE: Crawford, Multari & Clark, 2004; GlobeXplorer; ESA, 2010

- Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013 Figure 3.1-1 Scenic Resources



Existing



Proposed

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013
Figure 3.1-2
Visual Simulation,
Looking East from the Ocean

SOURCE: MWH, 2010



Figure 5. Alternative Site 1 Photo Plates

Photo 5-1. Zoomed in view from Coleman Park public access parking lot, looking northeast towards the project area. Morro Strand State Beach and dunes located in the foreground, with some hillside residential development in the background.



Photo 5-2. From current terminus of Embarcadero Road to the south, looking north across Morro Creek towards the project area. Public access beach parking in the foreground, with Morro Dunes RV park in the background.

Source: Dudek 2011



Figure 5. Alternative Site 1 Photo Plates

Photo 5-3. From northernmost public access parking lot on Embarcadero Road, looking southeast towards the current WWTP entrance and adjacent Morro Dunes RV park. Power Plant stacks visible in background.



Photo 5-4. From Atascadero Road, looking southwest across northern portion of the WWTP site towards Morro Rock.

Source: Dudek 2011



Exhibit 3 A-3-MRB-11-001 1 of 1



A-3-MRB-11-001 1 of 64

Appendix D MBCSD WWTP Flood Hazard Analysis



Exhibit 4 A-3-MRB-11-001 2 of 64

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT FLOOD HAZARD ANALYSIS



Prepared for Environmental Science Associates 707 Wilshire Boulevard, Suite 1450 Los Angeles, California 90017

Prepared by



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Job Number: 0866.001 Final Version August 7, 2009



Exhibit 4 A-3-MRB-11-001 3 of 64 August 7, 2009

Mr. Thomas Barnes **Environmental Science Associates** 707 Wilshire Boulevard, Suite 1450 Los Angeles, California 90017

Morro Bay-Cayucos Sanitary District (MBCSD) Wastewater Treatment Plant Subject: Flood Hazard Analysis

Dear Mr. Barnes:

We have completed the final version of the second phase of the Flood Hazard Analysis of the MBCSD Wastewater Treatment Plant. This phase of the report builds on the first phase by quantifying flood risks and presenting several alternatives to reducing these flood risks. As flood protection measures could have an impact on adjacent properties, the flood impact of these alternative improvements on neighboring properties is assessed. Recommendations for mitigating these impacts are also presented.

Sincerely,

WALLACE GROUP

Barry Rands, PE

Senior Civil Engineer

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT FLOOD HAZARD ANALYSIS TABLE OF CONTENTS

CERTIFICATION	1
PROFESSIONAL ENGINEER	1
LIST OF ACRONYMS AND TECHNICAL TERMS	2
EXECUTIVE SUMMARY	3
INTRODUCTION	4
LOCATION	4
EXISTING DRAINAGE SYSTEM	4
HYDROLOGY	5
PAST FLOOD STUDIES	6
FEMA FLOOD INSURANCE RATE MAP (FIRM) 2001 Morro Bay Power Plant (MBPP) Flood Hazard Analysis	6 7
CURRENT (2009) FLOOD ANALYSIS	8
FIELD INVESTIGATIONS FLOOD MODEL UPDATES 100-YEAR FLOOD EVENT SCENARIOS RESULTS OF THE FLOOD EVENT SCENARIOS DISCUSSION OF RESULTS	8 9 9 11 13
FLOOD PROTECTION AND FLOOD REDUCTION METHODS	15
RECOMMENDATIONS	16

APPENDIX

Exhibit 1 – Location Map Exhibit 2 – Existing Drainage System and Flooding Sources Exhibit 3 – FEMA Flood Insurance Rate Map (FIRM) Exhibit 4 – FLO-2D Flood Maps Exhibit 5 – Photographs Exhibit 6 - Recommended Plant Site Footprint

CERTIFICATION

Preparation of this report included efforts by the following persons:

Barry Rands, Project Manager Craig Campbell, Principal (peer review)

Professional Engineer

This report was prepared by, or under the direction of the following Professional Engineer in accordance with the provisions of Section 6700 of the Business and Professions Code of the State of California.

Civil Engineer:

nds -7-09 Date

Barry Rands, Civit Engineer PE 72929



LIST OF ACRONYMS AND TECHNICAL TERMS

- **1% ANNUAL CHANCE FLOOD:** Commonly known as the 100-year flood or the base flood, it is the flood that has a 1% chance of being equaled or exceeded in any given year. The boundaries and depths of this flood are shown on maps published by FEMA.
- **10% ANNUAL CHANCE FLOOD:** Commonly known as the 10-year flood. Not shown on FEMA maps.
- 2% ANNUAL CHANCE FLOOD: Commonly known as the 50-year flood. Not shown on FEMA maps.
- **0.2% ANNUAL CHANCE FLOOD:** Commonly known as the 500-year flood. Shown on FEMA maps for informational purposes.
- ACOE: Army Corps of Engineers

BASE FLOOD: 1% Annual Chance Flood (see above)

- CFS: cubic feet per second. This is a common unit of flow rate measurement in flood analysis.
- **FEMA**: Federal Emergency Management Agency
- **FIRM:** Flood Insurance Rate Map. The FIRM is an official map published by FEMA indicating boundaries and depths of flooding in a 1% chance (100-year) flood. Also referred to as the "FEMA map".
- **FIS**: Flood Insurance Study. The FIS is a FEMA-sponsored study to determine flood risks in a given community or county. The results are published as maps (FIRMs) and as a report. FIS usually refers to the report.
- **FLO-2D**: A hydraulic analysis program that uses a grid system to model flooding over unconfined surfaces.
- HEC-RAS: A hydraulic analysis program used to model flows in river and open channel systems.
- **LOMR**: Letter of Map Revision. An application for a LOMR is a formal process requesting a change to the official flood map (FIRM) published by FEMA.
- MBCSD: Morro Bay Cayucos Sanitary District (Joint owners of the WWTP)
- **MBPP:** Morro Bay Power Plant
- NAVD 88: North American Vertical Datum of 1988. See NGVD 29 for more details.
- **NGVD 29**: National Geodetic Vertical Datum of 1929. This vertical control datum was established in 1929 for vertical control surveying in the US. It has been replaced by the NAVD 88, though elevations shown on many maps still reference the NGVD 29 datum. The NAVD 88 datum is generally the higher of the two, but the difference is not constant. In Morro Bay, the NAVD 88 datum is approximately 2.8 feet higher than NGVD 29.

USGS: United States Geological Survey

WWTP: MBCSD Wastewater Treatment Plant. Also referred to in the report as the "plant".

EXECUTIVE SUMMARY

The MBCSD Wastewater Treatment Plant (WWTP) experiences both localized drainage problems and larger flooding problems. Flooding has occurred in the past at the plant, and the site is in a designated Flood Insurance Zone.

A flood analysis was performed for the WWTP site, based on two-dimensional flood modeling using FLO-2D software. This study shows that flooding at the WWTP site is in the range of 3 to 4.5 feet deep. The study also indicates that floodwaters have an outlet through the dunes to the north of the WWTP.

Examination of the current FEMA flood maps and reports show flood depths approximately 2.5 feet higher at the WWTP site than those determined with the above described FLO-2D model. The FEMA map shows about a third of the site as free from 100-year flooding and no flow outlet through the dunes. However, based on current topography, the entire site is below the 100-year flood elevation. Inconsistencies in the peak flow rates reported in the Flood Insurance Study (FIS) used to support the mapping were also discovered.

The FLO-2D model was originally developed by West Consultants for the Morro Bay Power Plant (MBPP) in 2001. To bring the flood analysis up to date, we obtained and revised the original FLO-2D files with current dune topography and analyzed the flood hazard under existing conditions. The updated analysis shows only a marginal increase in flood levels relative to the original study for the Power Plant. Ten flood risk reduction alternatives were also modeled to determine the impact on the WWTP and adjacent properties.

Results of the analysis of the alternatives and feedback from City and CSD staff lead to the following recommendations:

To address 100-year flooding issues:

- Construct the new WWTP facilities on higher ground. Construction on elevated fill provides the highest level of protection and least amount of operational inconveniences.
- Construct all or part of the new facilities on City owned land to the south of the current site that is already elevated, modeled in the analysis as MB10 through 12. Construction at this location will have the least adverse flood impact on neighboring properties.
- Reconstruct Atascadero Road with an inverted crown. This will reduce flooding for all properties along the road and nearly eliminate flooding at the high school for all but the most extreme storm events.
- The City floodplain management ordinance and funding agencies require that WWTP improvements be protected from flooding to the level of one foot above the 100-year flood elevation. Because of the potential reduction of flood levels relative to the current FIRM, we recommend that a Letter of Map Revision (LOMR) be applied for, including new hydrology and new hydraulic analyses. The LOMR process typically takes 3 to 6 months for complex situations such as this.

To address smaller, more frequent flooding:

- Drainage along Atascadero Road should be improved. Several options include:
 - o Increasing the size of the 24 inch culvert through the dunes at the end of the street
 - Reestablishment of a surface flow path to the ocean through the dunes at the end of the street.
 - Reconstruction of Atascadero Road with an inverted crown will increase street capacity from a few cfs to approximately 150 cfs.
 - Atascadero Road could be managed as a flood conveyance facility with appropriate warning signs for traffic and parking limitations.
- Raising the WWTP site with fill will alleviate most of the inconveniences of smaller floods on the operation of the plant, but will not improve the flooding situation for neighboring

properties. We recommend that one or more of the measures to alleviate smaller flooding be implemented to mitigate the small impact that the new plant will have on the floodplain.

INTRODUCTION

The MBCSD Wastewater Treatment Plant (WWTP) occupies a 6-acre parcel in Morro Bay at the west end of Atascadero Road, and only a few hundred feet from the Pacific Ocean. It experiences both localized drainage problems and larger flooding problems. Flooding has occurred in the past at the WWTP, and the site is in a Special Flood Hazard Zone. With the proposed upgrade of the WWTP, there is need to investigate the sources of flooding, quantify the flood risk, and assess several alternatives to reduce the risk of damage to the plant due to flooding. The impact of flood protection alternatives on neighboring properties also requires evaluation. This report seeks to address these flood related issues.

LOCATION

The WWTP is in a topographic depression, situated between higher ground to the east and a narrow swath of sand dunes to the west. Nearby developments include Morro Bay High School to the north, Hanson Aggregates directly to the east and Morro Dunes RV Park to the south and west. Other business nearby include two motels and another RV park on Atascadero Road to the east. Morro Creek flows to the ocean approximately 600 feet south of the WWTP, and is separated from the WWTP by high ground occupied by the Morro Dunes RV Park. The WWTP's low-lying location aggravates the flooding problem, as the only stormwater drainage outlets for the site are subject to blockage and backwater. A location map is shown in Exhibit 1.

EXISTING DRAINAGE SYSTEM

The existing drainage system is comprised of five principle components: three underground storm drain systems for smaller flows and two surface routes to the ocean. They are described in more detail below. Exhibits 2 and 5 provide a map and photos of these facilities.

- **Underground storm drain to the ocean**: A 24-inch diameter storm drain captures runoff from the north portion of the WWTP and conveys it to the beach, just beyond the littoral dunes. Its full-flow capacity is 8 cfs, though sand accumulation at the outlet frequently reduces the effective capacity. Periodic maintenance to clear the outlet of sand is necessary. A catch basin in Atascadero road also contributes flow to this drain.
- Underground storm drain to Morro Creek: A 24-inch diameter storm drain captures runoff from the south portion of the WWTP and conveys it to Morro Creek. The outlet is capped by a flap gate to prevent high flows in the creek from backing up into the plant. The drain has a full-flow capacity of 11 cfs, but the capacity will be greatly diminished during high flows in Morro Creek.
- Internal Stormwater Recapture System: Approximately half of the WWTP site drains to a stormwater recapture system. This system captures runoff from the central part of the site and redirects it to the plant headworks were it enters the wastewater treatment process for eventual ocean discharge. Flows in excess of the capacity of this system are conveyed to Morro Creek in the 24-inch drain described above.
- Surface drainage through the dunes at Atascadero Road: Historic photos of the coastline (see Exhibit 5.3) show that there was once a fairly large gap in the dunes at the west end of Atascadero Road. It likely served as a primary surface outlet to the ocean for flood flows from the floodplain on the north side of Morro Creek. Over the years, this gap has diminished in width and increased in height to the point that it no longer serves as a free outlet for flood flows. It should be noted that the reduction in width is due primarily to encroachment from non-native vegetation (ice plant), which also likely contributes to the accumulation of windblown sand.

• Surface drainage through the dunes to the north: The dunes between the high school and the beach are well vegetated with a trough running parallel to the coastline. This trough serves as a surface path to the ocean for floodwaters on the north side of Morro Creek. The entrance to the trough at the south end is adjacent to a dirt parking area at the end of Atascadero Road. The outlet is 1,700 feet to the north where it crosses a pedestrian walkway and drops into a creek that leads to the ocean. The elevation drop across the 1,700 feet is only 1 foot with many depressions and hillocks along the way. Consequently, flow through along this path rather slow. This path conveys approximately 5 % of the 100-year flood flow to the ocean. This portion of the dunes is owned and managed by the State Park system.

HYDROLOGY

Our scope of work included a review of existing hydrology studies and analysis of the flood hydraulics using flows from these existing studies. Our review indicates that an independent verification of flows is warranted, however, we do not anticipate major conclusions to be effected.

The WWTP is situated on the floodplain and near the mouth of Morro Creek, which drains a reported 24 square mile watershed to the east of the plant. Two major hydrology studies have been conducted for Morro Creek by FEMA and the Army Corps of Engineers (ACOE). The findings of these reports are discussed below.

Because of inconsistencies in the hydrology studies reviewed, two peak flow values have been used for flood modeling through the plant site. A high flow value corresponds to the 14,900 cfs reported in the FIS and a lower value which represents the 11,668 cfs from the ACOE report. Additional discussion of the hydrology of Morro Creek can be found in the *Morro Bay Power Plant Flood Hazard Analysis (2001)* described later in this report. The authors of that report used the higher flow values in their analysis.

FEMA: The current FEMA Flood Insurance Study (FIS) for San Luis Obispo County (August 2008) states that peak flows for Morro Creek, as well as several other creeks in the area, were calculated with use of regional regression equations developed by USGS in 1977 for the Central Coast. The published peak discharges for Morro Creek at two locations are shown in a table from the FIS shown below:

		PEAK DISCHARGES (cfs)						
FLOODING SOURCE <u>AND LOCATION</u> MORRO CREEK	DRAINAGE AREA (sq. miles)	10-PERCENT ANNUAL CHANCE	2-PERCENT ANNUAL CHANCE	1-PERCENT ANNUAL CHANCE	0.2-PERCENT ANNUAL CHANCE			
At mouth	24.0	2,200	9,200 7,800	14,900	38,000			

It should be noted that this table reveals three inconsistencies.

- The first is that the drainage areas given at the mouth and at State Hwy 1 are identical (24 square miles), when in fact they are not. Willow Camp Creek joins Morro Creek just west of the highway and adds 0.5 square miles to the total drainage area at the mouth.
- The second is that the large difference between the 1% chance flows in Morro Creek at the highway and at the mouth (11,200 and 14,900 cfs) cannot be accounted for by Willow Camp Creek. Because of Willow Camp Creek's small drainage area and its proximity to the mouth, its contribution to the peak flow of Morro Creek is likely only a few hundred cfs.
- The third inconsistency is that the table shows a higher 10% chance flow at the highway than at the mouth.

We have contacted the FEMA contractor responsible for reviewing map change requests in regards to the anomalies in the FIS. At this writing, we are still awaiting a reply.

ACOE: The ACOE study was published in 1999, benefiting from over 20 years of additional streamflow records beyond what was available for the USGS study. They compared three different

methods for determining peak flows and concluded that their "regression analysis method is recommended for use in determining discharge frequency values for San Luis Obispo County streams."¹ According to the ACOE study, use of this method results in a 100-year peak flow for Morro Creek at Morro Bay of 11,668 cfs.

On-site hydrology: Runoff produced from on-site rainfall is small in comparison to flows delivered by flooding in the Morro Creek watershed, but are nevertheless a nuisance if not effectively managed. Estimated peak flows generated from onsite rainfall are shown in the table below:

Frequency 2-yr		5-yr	10-yr	25-yr	50-yr	100-yr	
С	0.95	0.95	0.95	0.95	0.95	0.95	
l (in/hr)	1.3	1.9	2.3	2.6	3.0	3.2	
A (acres)	6.0	6.0	6.0	6.0	6.0	6.0	
Q (cfs)	7.4	10.8	13.1	14.8	17.1	18.2	

PAST FLOOD STUDIES

FEMA Flood Insurance Rate Map (FIRM)

The Federal Emergency Management Agency (FEMA) issued revised flood maps on August 28, 2008 for all of San Luis Obispo County. The new maps display flood information somewhat differently than in the past, but do not, in general, reflect new analysis. The flood boundaries and depths at the WWTP site remain unchanged, though the flood zone names have changed. More than half of the 6-acre site is classified as Zone AE, signifying that 100-year flood elevations have been determined and are shown on the map. Approximately 2.5 acres of the west portion of the site is classified as Zone X, signifying land that is subject to flooding during the 500-year (0.2% chance) flood. Zone X boundaries are provided for informational purposes only and are not used for regulatory or design purposes. The portion of the map (06079C0813F) that covers the WWTP site is included as Exhibit 3.

The FIRM indicates that the 100-year flood elevation at the plant is just over 20 feet based on the NVGD 1929 datum. In our initial review, we recommended that available topographic information for the WWTP site be tied to this datum in order to determine the depths of flooding at the site. We also recommended that the FEMA hydraulic data be checked against available topography and/or field measurements to determine if the FEMA flood levels are reasonable.

- **FEMA Flood Depths**: We were able to procure relatively recent topography (Fall 2000) from the Morro Bay Power Plant that includes topography at the WWTP site. This topography is on the NAVD 88 datum whereas the FEMA map is based on NGVD 29, but it includes a conversion factor to correlate the two surveys. Based on this topography, the typical FEMA flood depth on the WWTP site is approximately 6 feet but ranges between 5.5 to 7 feet. The deepest flooding would occur near the Primary Sedimentation Tank 2, as shown in Figure 1 on the next page. Note that the west part of the plant is shown as outside of the 100-year flood limit on the FIRM. The reason for this anomaly is that the FEMA flood limit is based on outdated topography of the site prior to the 1982 expansion. The area shown outside of the floodplain was part of the dune system prior to 1982.
- **Relation of FEMA flood levels to 1982 WWTP plans:** The procurement of new topographic maps has also allowed a determination to be made regarding the datum used in the Brown

¹ U.S. Army Corps of Engineers. (June 1999). <u>Regional Discharge-Frequency Analysis – San Luis Obispo County</u>, p. 5.

and Caldwell drawings of 1982. Based on a comparison of the two, it appears that the Brown and Caldwell drawings have used a datum of NGVD29 plus 100 feet.

• **FEMA Hydraulic Data**: We made a request to FEMA for the hydraulic and topographic data used to determine the base flood elevations (100-year flood level) in the vicinity of the WWTP site. FEMA notified us that they do not have any records of the requested data.



Figure 1: Portion of the FIRM showing the limits of the 100-year flood (shaded in pink)

• **Regulatory Requirements**: The flood depths depicted on FEMA maps are important from a regulatory perspective. Floodplain ordinances are tied to the floodplain limits and other data shown on these maps. New development must abide by the floodplain ordinances and floodplain data depicted on these maps, even if maps are outdated, unless an official map has been revised through a Letter of Map Revision (LOMR). Morro Bay's floodplain ordinance specifies floodproofing requirements for new non-residential buildings such as those proposed for the plant expansion. The ordinance requires elevation of structures or floodproofing to one foot above the base flood (100-year) elevation

2001 Morro Bay Power Plant (MBPP) Flood Hazard Analysis

The Morro Bay Power Plant commissioned a flood hazard study as part of their plant renovation plans. The study, performed by West Consultants in Bellevue, Washington, was submitted to the California Energy Commission (CEC) in June 2001 and is now part of the public record. We were able to obtain a copy of this report from West with assistance from the Morro Bay Power Plant Manager. Though the study area is focused on the Power Plant site, it also extends north beyond the WWTP site. According to this study, flood depths at the WWTP site are approximately 2 to 3 feet less than indicated on the FEMA map, however, the floodplain covers 100% of the site.

It also shows the source of flood flows, with some flow coming from Morro Creek and other flooding from Atascadero Road (see Exhibit 2.2) The Atascadero Road flow results from the severe restriction of Morro Creek as it passes under several bridges in the vicinity of Hwy 1 (Main Street, Hwy 1 and ramps, and a pedestrian bridge). This causes floodwaters on the east side of Hwy 1 to back up and flow to the south and north. To the south, they flow over Highway 1 and through portions of the Power Plant and on to the ocean. To the north, floodwaters find their way through a mobile home park and Main Street where they would cross under Highway 1 at the Atascadero Road underpass. From there, flows follow Atascadero Road to the dunes with the some flow spreading out and heading towards the high school.

The Morro Creek overflow occurs at Keiser Park, where floodwaters pass through the park and Hansen Aggregates before reaching the WWTP site.

The MBPP study indicates two flood paths through the coastal dunes in addition to the primary route in the Morro Creek channel. As the coastal dunes are in an almost constant state of movement, the current analysis incorporates current dune topography into the hydraulic model.

CURRENT (2009) FLOOD ANALYSIS

The past flood studies discussed above served as a basis for the flood analysis in this report. The current flood study is based on the FLO-2D model originally prepared by West Consultants. The model was run with modified hydrology as discussed below and updated by field investigations and a topographic survey of the dunes in the vicinity of the WWTP. This section begins with a summary of field investigations and concludes with the results of the analysis.

Field Investigations

The following issues were noted during field investigations in 2007 and 2009

- The existing headworks structure is below grade and is particularly at risk from flooding. Staff has constructed a low wall and installed facilities for placing flood gates. A stockpile of sand is also used for additional protection.
- The storm drain system is dependent on an open beach outfall. Due to shifting sand dunes, the outfall periodically becomes covered with sand. City maintenance crews are tasked with uncovering the outfall when needed. If this is not done, the plant storm drain system backs up. According to the WWTP Improvement Plans, the existing storm drain is a dedicated drain for the WWTP site.
- Some electrical control rooms are at grade and do not have flood protection other than operators placing berms and sand bags when needed.
- High ground water is present. Existing subsurface structures are filled with groundwater to within a few feet of the surface year-round.
- Staff coordinates with the neighboring Hanson Aggregate owners regarding the orientation of their yard and supplies. Flood waters from the southeast first cross the Hanson property. When Hanson has stock on hand of large concrete block, they store the blocks on-site in a manner that directs flood waters to Atascadero Road rather than through the WWTP.
- Recent flooding includes events in 1995 and 2004. In 1995, general flooding occurred from the Atascadero Road and from Morro Creek. In 2004, the flood source was limited to the overflows from the creek at Keiser Park. These flow paths are illustrated in Exhibit 2.2.
- The topography map reveals that sump conditions exist on the site in the vicinity of Primary Sedimentation Tank 2 with a low elevation of 15.7 feet. The lowest overland escape route for this sump is through the front entrance with an elevation of 16.3. Though this sump has an underground drain, high groundwater water table or blockage of this underground drain can cause over 6 inches of flooding of the sump area even during small storm events.

- The elevation of the primary surface outlet through the dunes has risen approximately two feet, but the secondary outlet through the dunes to the north has remained roughly the same.
- The capacity of Morro Creek in the vicinity of Main Street/Hwy 1 is limited due to channel geometry, restrictions at bridge openings and a build-up of sediment in the main channel. A depth gage at the Hwy 1 bridge indicates that sediment depth is 6 feet at that location.

Flood Model Updates

The FLO-2D files used to analyze flood hazards in 2001 for the Morro Bay Power Plant were obtained and reformatted to run on the latest version of FLO-2D. The files were then reviewed and modified to reflect current conditions as follows:

- The main modification to the base model was to incorporate current dune topography based on survey information gathered in February, 2009. As suspected, the dunes have changed since 2001, gaining an additional 2 feet in height at a critical outlet location at the end of Atascadero Road. The dune outlet near the north side of the high school, however, was virtually unchanged.
- Per the suggestion of the FLO-2D program developers, the storm hydrograph was revised to better represent the design flood, keeping the same flood peak, but modifying the shape and volume of the hydrograph to conform to hydrographs commonly used on the Central Coast. The revised hydrograph has a smaller total storm volume. A second flood hydrograph was developed representing the smaller peak flows from the ACOE study.
- In addition, the model was reviewed to determine if the current WWTP building layout and areal coverage were correctly accounted for in the model. Some minor adjustments were made accordingly.
- The model was also modified to relocate the junction of Willow Camp Creek to its true location as shown on the topographic map.

The updated existing conditions model was then developed with ten different alternative scenarios, based on flood protection/reduction strategies described in earlier reports and as discussed with City and CSD staff. These flood protection and reduction strategies are further elaborated in the next section of this report.

100-year Flood Event Scenarios

Our research discovered a range of values for the 100-year peak flow of Morro Creek. We modeled the upper and lower range of these values for most of the scenarios.

High Flow (14,900 cfs): Including the original and existing conditions models, a total of twelve scenarios were modeled at this flow rate. They are described as follows:

- 1. **MB1: Original 2001 model with the revised hydrograph**. The flood hydrograph for Morro Creek upstream of the Hwy 1 bridge was modified as described above. The junction of Willow Camp Creek and Morro Creek was corrected. No other changes to the original model were made.
- 2. **MB2: Existing Conditions Model**. The current dune topography was incorporated into the model as well as changes in the model representation of WWTP facilities to account for blockage of flow by existing structures. This served as the base model for all other scenarios.
- 3. **MB3: Entire site protected**. A floodwall protecting or fill elevating the entire site including the area around the new oxidation ponds was incorporated into this model. A 6.4 acre area is protected in this scenario.
- 4. MB4: Entire site protected with improved dune outlet. Similar to MB3, but with the

addition of an improved outlet through the dunes at the end of Atascadero Road.

- 5. **MB5: Flood protection of individual buildings and sludge beds**. Individual buildings are floodproofed in this model, allowing floodwaters to pass through the site, except for the sludge beds, which are surrounded by a perimeter wall covering 1.8 acres.
- MB6: Flood barrier along north bank of Morro Creek at Keiser Park. This scenario is based on MB5, but includes a full height floodwall or levee along the north bank of Morro Creek in Keiser Park.
- 7. **MB7: Entire site protected and flood barrier on north side of Keiser Park**. Similar to MB3, but with the addition a full height floodwall or levee on the north side of Keiser Park (allowing the park to flood).
- 8. **MB8: Reduced site footprint protected and flood barrier on north side of Keiser Park.** This scenario features a perimeter wall or fill that protects a smaller, 4.6 acre, area and includes a floodwall or levee on the north side of Keiser Park (allowing the park to flood).
- 9. **MB9: Reduced site footprint protected**. This scenario features a perimeter wall or fill that protects a smaller, 4.6 acre, area. The new oxidation pond area is included, but most of the structures within 200 feet of Atascadero Road would not be included inside this smaller plant footprint.
- 10. **MB10: 5.5-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 5.5 acre area including the existing sludge ponds and approximately 4 acres of land to the south that is currently used for RV storage. All existing WWTP structures are demolished in this scenario.
- 11. **MB11: 7.3-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 7.3 acre area including the existing sludge ponds, approximately 4 acres of land to the south that is currently used for RV storage, and 2 acres of land currently used by Hansen Aggregates (in the vicinity of the proposed oxidation ditches). All existing WWTP structures are demolished in this scenario.
- 12. **MB12: 9.1-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 9.1 acre area including the existing sludge beds and much of the south half of the plant, approximately 4 acres of land to the south of the plant that is currently used for RV storage, and 2 acres of land currently used by Hansen Aggregates (in the vicinity of the proposed oxidation ditches). All existing WWTP structures within 200 feet of Atascadero Road are demolished in this scenario.

Low Flow (11,600 cfs): Including the existing conditions models, a total of eight scenarios were modeled at this flow rate. They are described as follows:

- 1. **MB2b: Existing Conditions:** The current dune topography was incorporated into the model as well as changes in the model representation of WWTP facilities to account for blockage of flow by existing structures. This served as the base model for all other scenarios.
- 2. **MB3b: Entire site protected:** A floodwall protecting or fill elevating the entire site including the area around the new oxidation ponds was incorporated into this model. A 6.4 acre area is protected in this scenario.
- 3. **MB5b: Flood protection of individual buildings and sludge beds**. Individual buildings are floodproofed in this model, allowing floodwaters to pass through the site, except for the sludge beds, which are surrounded by a perimeter wall covering 1.8 acres.
- 4. **MB7b: Entire site protected and flood barrier on north side of Keiser Park**. Similar to MB3, but with the addition a full height floodwall or levee on the north side of Keiser Park (allowing the park to flood).

- 5. **MB9b: Reduced site footprint protected**. This scenario features a perimeter wall or fill that protects a smaller, 4.6 acre, area. The new oxidation pond area is included, but most of the structures within 200 feet of Atascadero Road would not be included inside this area.
- 6. **MB10b: 5.5-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 5.5 acre area including the existing sludge ponds and approximately 4 acres of land to the south that is currently used for RV storage. All existing WWTP structures are demolished in this scenario.
- 7. **MB11b: 7.3-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 7.3 acre area including the existing sludge ponds, approximately 4 acres of land to the south that is currently used for RV storage, and 2 acres of land currently used by Hansen Aggregates (in the vicinity of the proposed oxidation ditches). All existing WWTP structures are demolished in this scenario.
- 8. **MB12b: 9.1-acre site footprint protected**. This scenario features a perimeter wall and/or fill that protects a 9.1 acre area including the existing sludge beds and much of the south half of the plant, approximately 4 acres of land to the south of the plant that is currently used for RV storage, and 2 acres of land currently used by Hansen Aggregates (in the vicinity of the proposed oxidation ditches). All existing WWTP structures within 200 feet of Atascadero Road are demolished in this scenario.

These scenarios are discussed in greater detail in the section on Flood Protection and Flood Reduction Methods.

Results of the Flood Event Scenarios

Results of the above described scenarios are shown in maps form in Exhibit 4. The tables on the following pages summarize the results at select locations. All elevations are given in feet based on the NAVD datum of 1988. Rows titled "FF elev." are finish floor elevations of the indicated building according to survey information obtained on July 1, 2009. Rows titled "Ground EI." are average ground elevations in the vicinity of the location indicated based on topographic mapping performed in 2001. The row marked "Difference" shows the impact in depth of flooding, measured in feet relative to existing conditions, due to the modeled improvements. These values are color coded as follows to facilitate comparison:

- **Light red** indicates impact greater than 1.5 inches.
- **Yellow** indicates impact between 0 and 1.5 inches.
- **Light green** indicates a reduction in the depth of flooding.

MBCSD WW	TP Flood I	Hazard Anal	ysis	Q100 = 14,9	900 cfs								
		MB1	MB2	MB3	MB4	MB5	MB6	MB7	MB8	MB9	MB10	MB11	MB12
					Prot Entire	Protect	Prot. Bldgs &	Entire Site	Reduced	Reduced			
Location			Existing	Protect	Site + Dune	Bldgs &	Beds +	Protected +	Size +	Size	5.5-acre	7.3-acre	9.1-acre
Grid#		2001 topo	Conditions	Entire Site	Breach	Beds	Creek Fwall	KPark Fwall	Kpark Fwall	Protected	Protected	Protected	Protected
	WSEL	20.55	20.6	21.47	21.42	20.75	20.31	20.98	20.26	20.84	20.69	20.64	20.8
Maint Bldg	FF elev.	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88
161	Depth	2.67	2.72	3.59	3.54	2.87	2.43	3.1	2.38	2.96	2.81	2.76	2.92
	Difference		0	0.87	0.82	0.15	-0.29	0.38	-0.34	0.24	0.09	0.04	0.2
	WSEL	21.11	21.19	22.09	22.07	21.34	20.91	21.56	20.9	21.45	21.18	21.15	21.42
Desal Bldg	FF elev.	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22
182	Depth	0.89	0.97	1.87	1.85	1.12	0.69	1.34	0.68	1.23	0.96	0.93	1.2
	Difference		0	0.9	0.88	0.15	-0.28	0.37	-0.29	0.26	-0.01	-0.04	0.23
	WSEL	19.94	20.07	19.78	19	20.23	19.79	19.43	19.72	20.24	20.33	20.27	20.21
Admin Bldg	Ground El.	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
179	Depth	3.24	3.37	3.08	2.3	3.53	3.09	2.73	3.02	3.54	3.63	3.57	3.51
	Difference		0	-0.29	-1.07	0.16	-0.28	-0.64	-0.35	0.17	0.26	0.2	0.14
	WSEL	20.15	20.25	No Flood	No Flood	20.4	19.93	No Flood	19.93	20.49	20.52	20.46	20.46
Chlor Bldg	Ground El.	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
180	Depth	4.45	4.55	No Flood	No Flood	4.7	4.23	No Flood	4.23	4.79	4.82	4.76	4.76
	Difference		0	No Flood	No Flood	0.15	-0.32	No Flood	-0.32	0.24	0.27	0.21	0.21
	WSEL	21.39	21.4	21.88	21.87	21.45	21.24	21.56	21.29	21.51	21.4	21.41	21.5
MBHS	FF elev.	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86
123	Depth	0.53	0.54	1.02	1.01	0.59	0.38	0.7	0.43	0.65	0.54	0.55	0.64
	Difference		0	0.48	0.47	0.05	-0.16	0.16	-0.11	0.11	0	0.01	0.1
	WSEL	23.68	23.68	23.7	23.7	23.68	23.64	24	24	23.69	23.68	23.69	23.69
Motel 6	FF elev.	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75
186	Depth	1.93	1.93	1.95	1.95	1.93	1.89	2.25	2.25	1.94	1.93	1.94	1.94
	Difference		0	0.02	0.02	0	-0.04	0.32	0.32	0.01	0	0.01	0.01
Morro	WSEL	22.04	22.04	22.42	22.41	22.08	21.81	21.95	21.73	22.15	22.05	22.11	22.17
Strand RV	FF elev.	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34
184	Depth	1.7	1.7	2.08	2.07	1.74	1.47	1.61	1.39	1.81	1.71	1.77	1.83
	Difference		0	0.38	0.37	0.04	-0.23	-0.09	-0.31	0.11	0.01	0.07	0.13
Morro	WSEL	25.47	25.49	25.49	25.49	25.49	25.49	25.8	25.81	25.49	25.49	25.49	25.49
Shores Inn	FF elev.	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39
187	Depth	0.08	0.1	0.1	0.1	0.1	0.1	0.41	0.42	0.1	0.1	0.1	0.1
	Difference		0	0	0	0	0	0.31	0.32	0	0	0	0
So Dune	WSEL	19.56	19.8	19.68	18.25	20.07	19.65	19.35	19.59	20.08	20.17	20.11	20.05
Outlet	Ground El.	18	20	20	15	20	20	20	20	20	20	20	20
178	Depth	1.56	0	-0.32	3.25	0.07	-0.35	-0.65	-0.41	0.08	0.17	0.11	0.05
170	Difference		0	-0.32	3.25	0.07	-0.35	-0.65	-0.41	0.08	0.17	0.11	0.05
	WSEL	21.41	21.42	21.42	21.42	21.42	21.48	21.45	21.45	21.42	21.42	21.42	21.42
Power Plant	Ground El.	16	16	16	16	16	16	16	16	16	16	16	16
353	Depth	5.41	5.42	5.42	5.42	5.42	5.48	5.45	5.45	5.42	5.42	5.42	5.42
	Difference		0	0	0	0	0.06	0.03	0.03	0	0	0	0

Exhibit 4 A-3-MRB-11-001 17 of 64

MBCSD WWTP Flood Hazard Analysis Q100 = 11,600 cfs										
		MB2b	MB3b	MB5b	MB7b	MB9b	MB10b	MB11b	MB12b	MB13b
				Protect	Entire Site	Reduced				7.3-acre
Location		Existing	Protect Entire	Bldgs &	Protected +	Size	5.5-acre	7.3-acre	9.1-acre	Protected +
Grid#		Conditions	Site	Beds	KPark Fwall	Protected	Protected	Protected	Protected	Invert Road
	WSEL	20.05	20.90	20.19	20.56	20.24	20.09	20.06	20.20	20.14
Maint Bldg	FF elev.	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88	17.88
161	Depth	2.17	3.02	2.31	2.68	2.36	2.21	2.18	2.32	2.26
	Difference	0.00	0.85	0.14	0.51	0.19	0.04	0.01	0.15	0.09
	WSEL	20.62	21.52	20.80	21.16	20.89	20.63	20.61	20.86	20.56
Desal Bldg	FF elev.	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22	20.22
182	Depth	0.40	1.30	0.58	0.94	0.67	0.41	0.39	0.64	0.34
	Difference	0.00	0.90	0.18	0.54	0.27	0.01	-0.01	0.24	-0.06
	WSEL	19.51	19.39	19.71	19.09	19.72	19.78	19.73	19.69	19.86
Admin Bldg	Ground El.	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70
179	Depth	2.81	2.69	3.01	2.39	3.02	3.08	3.03	2.99	3.16
	Difference	0.00	-0.12	0.20	-0.42	0.21	0.27	0.22	0.18	0.35
	WSEL	19.67	No Flooding	19.84	No Flooding	19.93	19.92	19.88	19.89	19.98
Chlor Bldg	Ground El.	15.70	15.70	15.70	15.70	15.70	15.70	15.70	15.70	15.70
180	Depth	3.97	No Flooding	4.14	No Flooding	4.23	4.22	4.18	4.19	4.28
	Difference	0.00	No Flooding	0.17	No Flooding	0.26	0.25	0.21	0.22	0.31
	WSEL	21.01	21.41	21.05	21.20	21.08	21.00	21.01	21.07	20.87
MBHS	FF elev.	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86	20.86
123	Depth	0.15	0.55	0.19	0.34	0.22	0.14	0.15	0.21	0.01
	Difference	0.00	0.40	0.04	0.19	0.07	-0.01	0.00	0.06	-0.14
	WSEL	23.27	23.28	23.27	23.57	23.28	23.27	23.28	23.28	23.04
Motel 6	FF elev.	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75	21.75
186	Depth	1.52	1.53	1.52	1.82	1.53	1.52	1.53	1.53	1.29
	Difference	0.00	0.01	0.00	0.30	0.01	0.00	0.01	0.01	-0.23
Morro	WSEL	21.57	21.85	21.59	21.54	21.63	21.56	21.60	21.64	21.45
Strand RV	FF elev.	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34	20.34
184	Depth	1.23	1.51	1.25	1.20	1.29	1.22	1.26	1.30	1.11
	Difference	0.00	0.28	0.02	-0.03	0.06	-0.01	0.03	0.07	-0.12
Morro	WSEL	25.23	25.23	25.23	25.48	25.23	25.23	25.24	25.23	25.24
Shores Inn	FF elev.	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39	25.39
187	Depth	-0.16	-0.16	-0.16	0.09	-0.16	-0.16	-0.15	-0.16	-0.15
	Difference	0.00	0.00	0.00	0.25	0.00	0.00	0.01	0.00	0.01
So Duno	WSEL	19.27	19.30	19.59	19.03	19.60	19.65	19.61	19.60	19.73
Outlet 178	Ground El.	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
	Depth	-0.73	-0.70	-0.41	-0.97	-0.40	-0.35	-0.39	-0.40	-0.27
	Difference		0.03	0.32	-0.24	0.33	0.38	0.34	0.33	0.46
Power Plant	WSEL	20.80	20.80	20.80	20.82	20.79	20.80	20.80	20.80	20.80
	Ground El.	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
353	Depth	4.80	4.80	4.80	4.82	4.79	4.80	4.80	4.80	4.80
	Difference	0.00	0.00	0.00	0.02	-0.01	0.00	0.00	0.00	0.00

Discussion of Results

The results shown in the tables above reveal several significant findings related to flood hazards in the vicinity of the WWTP. The following set of comments applies to scenarios with the high flow (14,900 cfs) assumption.

- The increase in dune height at the end of Atascadero Road since 2001 has closed one of the surface outlets through the dunes. The outlet through the dunes to the north remains open and is an important outlet for floodwaters. The restriction to one dune outlet has raised the flood elevation at the WWTP by 0.13 foot at the WWTP Administration Building and somewhat less at other locations.
- The perimeter floodwall or full site fill (modeled as MB3) has a significant impact on

surrounding properties, raising flood elevations as much as 0.5 foot at the High School. This impact is due to the plant's low elevation on the floodplain, directly in the path of floodwaters as they make their way to the dunes. Blocking that path with fill or an impermeable floodwall will raise floodwater elevations elsewhere.

- Restoring the outlet in the dune at the end of Atascadero Street (modeled as MB4) will decrease flood levels at the plant site, but will do little to mitigate the impact of the full perimeter floodwall on other properties.
- Flood protection of individual buildings and facilities (modeled as MB5) shows a minimal impact on surrounding properties (i.e. only 0.05 foot rise at MBHS). This scenario is based on the proposed site plan which includes construction of new facilities and demolition of retired structures.
- The construction of a full height flood barrier along the north bank of Morro Creek in Keiser Park (modeled as MB6) will provide some flood protection for all properties on the north bank, but will not eliminate flooding. Floodwaters from the Atascadero Road underpass will continue to cause flooding at the WWTP site, though flood elevations will be lessened by approximately 0.3 foot at the WWTP. Though this scenario was modeled and initially considered as a viable option, its cost and difficulty of construction has removed it from consideration.
- The placement of the full height flood barrier on the north side of the park (MB7&8), allowing the park to flood, reduces impact to the Power Plant, but raises flood levels at the two motels on Atascadero Road. Based on this impact, this wall is also not recommended.
- Protection of a reduced plant footprint (MB9) significantly reduces but does not eliminate the impact on surrounding properties. Impact at the high school is reduced from 6 inches to less than 1.5 inches relative to full site protection.
- Moving portions of the plant to existing high ground to the south of the WWTP is modeled in MB10-12, showing that the least flood impact occurs with a total plant footprint of 5.5 acres, 2/3 of which is located on existing high ground. The 7.3-acre scenario (MB11) also shows a very low level of flood impact on neighboring properties.
- Though not shown on the above table, it was discovered that overtopping of the banks of Morro Creek at Keiser Park occur when the flow in the creek exceeds 3,500 cfs. This is somewhat greater than the 10% chance flood (10-year flood) and would explain why flooding from this direction has been experienced at the WWTP site in recent memory.
- Floodwall height for all perimeter walls will be approximately 5.5 feet tall. Height of fill would be similar. This includes 1 foot of freeboard as required by ordinance for both walls and fill.

The analyses based on a smaller peak flow (11,600 cfs) lead to these findings:

- The overall flood depth in the vicinity of the plant is reduced 6 inches on average.
- Flood impacts for the various scenarios are reduced, but not eliminated. Protection of the entire site, for example, still raises flood levels at the school by 0.4 foot. The smaller footprint site with flood protection reduces impact at the school to less than an inch.
- The three models that use existing high ground (MB10b-12b), show that flood impacts at this flow rate are virtually insignificant.
- When combined with the recommended mitigation of reconstruction of Atascadero Road with an inverted crown, the overall project impact will be favorable, reducing or nearly eliminating flooding at select locations (MB13b)
- Protective floodwall and fill height requirements would be reduced by 6 inches from 5.5 to 5 feet.

Our analysis shows that flooding during the 100-year flood is likely to occur over the entire site with floodwaters originating from both Morro Creek to the south and from the Atascadero Road underpass to the east. Because of the limited capacity of Morro Creek, storms of lesser magnitude

will also cause flooding from these same sources. The limited capacity of the underground drainage system does little to reduce flood risk from large storm events. Various methods of flood protection and flood reduction will have different levels of impact on the site itself and on nearby properties. These methods are discussed in the following section.

FLOOD PROTECTION AND FLOOD REDUCTION METHODS

There are essentially two approaches that may be applicable for addressing drainage and flooding when designing the WWTP expansion. One approach is flood protection or floodproofing and the second approach is through flood reduction. These two approaches can be used together for the greatest reduction in flood risk. A description of how these methods would be specifically implemented in and around the WWTP are described below.

- Flood Protection: This approach acknowledges that flooding occurs and measures are taken to floodproof the improvements needing protection. Floodproofing can be done on individual buildings and critical components or the entire site could be floodproofed with a perimeter wall.
 - <u>Floodproofing of individual components</u> involves such measures as provision of watertight seals for doors and windows of buildings, elevation of electrical components above flood level, and/or constructing floodwalls around critical areas (such as the headworks and sludge beds). This allows floodwaters to move freely through the site, with little impact on the surrounding neighborhood. The major disadvantage of individual component floodproofing is that human movement between and entry to sealed buildings and walled areas is not possible during flood stage. Also, the cumulative wear-and-tear on a building's external components as a result of recurring inundation may render a floodproofing strategy infeasible. The cost of repeated service interruption and of frequent cleanup activities, as well as the effects of having to repeatedly implement a flood emergency plan, must be assessed.
 - <u>A perimeter flood wall</u> around the entire plant would provide a higher level of protection. Such a wall would include a watertight gate for vehicular access and use existing drain pipes to drain the site from internal runoff. Once the gate is closed, internal movement between buildings is possible, though entrance and exit from the plant would have to be curtailed. The biggest drawback to this approach would be the impact on flood levels for adjacent properties, especially the high school, where flood levels would rise as much as 6 inches.
 - <u>Building the plant on imported fill or existing high ground, elevated a foot above the calculated flood level, would provide the highest level of protection as it eliminates the need for closing gates in anticipation of a flood. Impact on surrounding properties depends on the location of the new plant. Importing fill to raise the existing site would have the greatest impact on surrounding properties, while moving all or part of the plant to the south on existing high ground would minimize impact. The hydraulic model shows the level of impact for several different plan footprint configurations.</u>
- Flood reduction: This approach seeks to improve drainage in the vicinity of the WWPT site so that flooding is reduced or eliminated. Considering the mechanisms of flooding, the opportunities for reducing flooding are:
 - <u>Atascadero Road Overflow:</u> As this is one of the paths of major floods, the improvement of flow along Atascadero Road would benefit all properties on the north side of Morro Creek. The current road is constructed with 6 inch curb faces along much of its length, but the inconsistent road section leaves the road with very little flood carrying capacity. Converting this road to one that conveys flow in the center of the street in an inverted crown section would significantly increase flow capacity to approximately 150 cfs which

would reduce or eliminate flooding in smaller storms. For the greatest effectiveness, the reconstruction of the road with an inverted crown should be accompanied by an increase in the culvert size from the end of Atascadero Road through the dunes. This would improve the area drainage, but would still be dependent on city maintenance to keep the storm drain beach outfall uncovered from sand.

- <u>Dune Outlet Improvements:</u> Surface outlet improvements through the dunes could have a beneficial impact on the plant site, especially in smaller floods. An improved dune outlet would not have a significant beneficial effect during larger floods, especially on buildings further away from the dunes. One drawback to this alternative is the likely difficulty in obtaining authorization to construct improvements in this area, which is adjacent to Snowy Plover habitat. The land itself, however, is jointly owned by the City of Morro Bay and Cayucos Sanitary District and is covered with ice plant, a non-native species. There may be an opportunity for improvements in exchange for eradication of this exotic plant and revegetation of the dunes with native vegetation. Another issue is the danger of wave runup. Though FEMA has predicted a wave runup elevation of 11.4 feet (NAVD 88) in the 1% chance (100-year) event, anecdotal information indicates that waves reach the base of dunes (~ 10 feet NAVD) annually. There has been at least one observation of a wave overtopping the dunes at the former outlet where the elevation was approximately 17 feet at the time of the observation. Any improvement of a surface opening in the dunes must account for the risk of storm surge and wave runup.
- <u>On-site Drainage:</u> Improvements that would be of benefit in smaller storms would be to increase the size of the storm drain from the plant to the outfall. Another alternative to a gravity storm drain is the installation of a storm water pumping station, which would allow for a higher outlet. However, a pump station sized to handle plant drainage would be overwhelmed during periods of inundation from upstream overflow. Rebuilding the plant on raised fill will eliminate the need for any of these measures.
- O Creek Overflow (from Southeast): This flooding comes from an 800-foot reach of Morro Creek, along the low banks upstream of the Morro Dunes RV Park and downstream of the highway. One flood reduction option is to construct a berm to reduce flows that overtop the bank at this location. A FEMA certified levee may not be feasible, but a smaller non-erodable berm designed to keep smaller flows from overtopping may be a reasonable alternative. Another option is to increase the capacity of the creek by cutting a bypass channel through the meander just downstream of Keiser Park. However, there are many concerns with this environmental, property ownership, extensive excavation, and hydraulic feasibility. If pursued, the creek modifications could be combined with a creek habitat enhancement strategy to address environmental concerns. The flood barrier on the bank would likely be much easier to permit since it does not involve work directly in the creek. This section of the creek is a large source of flood risk, and addressing it could be very helpful for reducing flooding, not only on the WWTP, but also for all properties on that side of the creek

RECOMMENDATIONS

Based on these findings, we recommend the following actions to address flooding issues at the WWTP site. The recommendations are grouped according to type of flooding.

To address 100-year flooding issues:

- Construct the new WWTP facilities on higher ground. Construction on elevated fill provides the highest level of protection and least amount of operational inconveniences.
- Construct all or part of the new facilities on City owned land to the south of the current site that is already elevated, modeled in the analysis as MB10 through 12. Construction at this location will have the least adverse flood impact on neighboring properties. An illustration of one of these scenarios (MB11) is shown in Exhibit 6.

- Reconstruct Atascadero Road with an inverted crown. This will reduce flooding for all properties along the road and nearly eliminate flooding at the high school for all but the most extreme storm events.
- The City floodplain management ordinance and funding agencies require that WWTP improvements be protected from flooding to the level of one foot above the 100-year flood elevation. Because of the potential reduction of flood levels relative to the current FIRM, we recommend that a Letter of Map Revision (LOMR) be applied for, including new hydrology and new hydraulic analyses. The LOMR process typically takes 3 to 6 months for complex situations such as this.

To address smaller, more frequent flooding:

- Drainage along Atascadero Road should be improved. The options listed below could be implemented individually or in combination:
 - Increasing the size of the 24 inch culvert through the dunes at the end of the street
 - Reestablishment of a surface flow path to the ocean through the dunes at the end of the street.
 - Reconstruction of Atascadero Road with an inverted crown will increase street capacity from a few cfs to approximately 150 cfs, which is very significant for small storms.
 - Atascadero Road could be managed as a flood conveyance facility with appropriate warning signs for traffic and parking limitations.
- Raising the WWTP site with fill will alleviate most of the inconveniences of smaller floods on the operation of the plant, but will not improve the flooding situation for neighboring properties. We recommend that one or more of the measures to alleviate smaller flooding be implemented to mitigate the small impact that the new plant will have on the floodplain.

APPENDIX



Exhibit 4 A-3-MRB-11-001 24 of 64 **EXHIBIT 1**



Exhibit 4 A-3-MRB-11-001 25 of 64



The MBCWWTP is vulnerable to flooding from overflows of Morro Creek coming from two directions as shown. Hydraulic modeling predicts that these overflows occur when flows in Morro Creek exceed approximately 3,500 cfs, which is slightly larger than the FEMA 10% chance (10-year) flood. Flooding from these sources has been experienced in 1995 and 2004.

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT FLOOD HAZARD ANALYSIS MORRO CREEK OVERFLOW PATHS

EXHIBIT 2.2

Exhibit 4 A-3-MRB-11-001 26 of 64


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Exhibit 4 A-3-MRB-11-001 28 of 64

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	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18.4	19:6	19.5	26.6	30.8		
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Exhibit 4 A-3-MRB-11-001 29 of 64

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4.5ft —	125	126	127	138	120	10.5	141	142	142	13.4	145	146	42	149	1/0	150	151	152		
	0.12	0	6.38	0.43	0.24	1.8	0.26	1.68	4.03	2.67	0.36	2.51	0	1.5	0.68	0	1.01	0.24		ш 88
	9.54	Sey. P	18.01	19.39	19.86	20.54	21.47	22.02	22.09	22.21	23.12	23.75	25.21	28.21	32.08	32.89	34.06	34.98		AR VD8
	9.2	24	15	17.2	16.2	17	18	19	19	19,8	22	21.4	22.4	24.86	28.7	31,4	32.9	33.5	A H	SNC AN
4.0 ft —	155	156	157	158	159	160	161	162	163	164	765	166	767	768	169	170	111	172	R O	ATIC EE1
	9.12	12.79		19.68	19.78	0 5.54	3.47	22.09	22.18	22.42	23.06	23.70	25.49	5.55	32.47	32.74	33.78	34.85	PF 7	ЧЧ
	7.7	11.5	20	16-	Ge 19	16.8	17	18.8	19	20	21	21.6	24.5	45.6	29	29.4	31,4	31,4		Ш <i>—</i>
	175	176	177	178	179	780	381	182	183	184	185	186	187	188	189	190	197 1	192	AN AT	
35 0 _	1.42	1.29	0	3.68	3.78	0	P .	3.29	3,18	2.42	2.06	2.1	0.99	0	3.47	3.34	2.38	3.45	ר ה צ	
5.510	7.5	13	24.2	18.7	-193	16.8	1	19	-20	20.6	21	23.00	23.4	44.5	28	28.4	29.2	29.2		
	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213		
	1.83	0	0	0.72	0.35	0	0	3.19	2.39	2.09	2.05	1.6	0.96	0	4.6	4.34	4.14	14.88	ŠŽĽ	NO
	10.90	11.25	12.85	22	22.	15	15.5	20	22.63	22.79	23.12	23.93	25.25	44	32.41	32.62	33,11,	33.98	⊢∢Ŧ	АТІ
3.0 ft -	217	218	210	220	221	222	223	224	225	226	227	228	220	230	- 231	222	2223	234) E
	9.59	0.45	0.65	0	0	0	0	0	1.63	2.79	1.82	1.23	1.33	000	3.41	14.77	13.9	4.78	A H H	
9		11.30			5 8		20.03	Dell'	22.61	22.79	23.14	24.15	25.46	28.60	31.92	32.36	32.44	32.82		Ш Ш С
T L	5.8	8.8	17.6	21.2	22.4	20.7	- 19	24	22	20	21.3	22	- 22	24.5	31	28	26.8000	28	₽ĬŌ	LE(A RPA
Ė 2.5 ft —	237	238	239	240	241	242	243	244	-245	246	184	248	10'79	12.92	251	252	253	254	Å Å	
DE	11.21	10.73				19.75	19.70	20.95	22.41	22.79	23,16	24.23	24.77	26.07	31.29	31.71	31.72	31,71	A	D D D
8	8	8.6	18.8	24	21.8	19.7	17.4	20	17	18	21	22	22	24,5	31	27-	26.2	27.1		
Ľ	257	258	259	260	261	262	- 263	264	265	266	267	268	269	270	271	272	273	274	А В В В В В В В В В В В В В В В В В В В	N U U N
L 2.0 ft -	9.59	8.87	- 0 	0	0	0.05	-19-62	0.95	9,53	9.57	9.68	2.23	2.11	25.07	0.29	4.17	3.52	4.67	S S S	
	8	9.5	17.8	21.4	21	18.8	15.7	17.5	18	17.5	17.2	- 21-	21.5	23	28.9	26	1 24.8	26.1	ő Ö	2002
	278	279	280	281	282	- 283	284	285	286	287	288	289	290	291	292	293	294	295	N L	66 0 00
	2.81	8.81	0	0	0	0.49	10.81	11.26	11.18	8.12	9,66	3.11	3.04	2.07	1.1	5.16	6.39	5.09	К К	20.
1.5ft -	9.67	9.5	15.9	16.5	17.5	17.5	15.7	17.5	713	21.1	21-	18.8	24.55	24.99	23.02	26.6	24	24.6		
	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	345	316	λ	
	2.07	1.05	6.09	7.31	8.51	10.1	3.9	2.18	- 0	9	0	9.54	2.93	2.69	1.42	3.82	6.99	6.41	A 00	
	8.80	44	40.00	10.7	18.25	19.41	- 22	20.0	22	1 27	22	23.28	24.37	24.99	25,52	29.25	30.35	30.96	0 -	
100	220	224	222	10.7	224	225	226	23.0	220	22.1	220	224	214	20.0	- 224	21.5	20.4	237	Ř	
1.010 -	1.4	0	0	0	0.25	0.01	0	0	0	0	0	2.28	8.98	4.39	4.52	1.75	3.95	7.96	NC NC	
	8.54		N	30	1.2.1	and the second	1	1111			11	21.40	21.42	24.52	- 25.35	25.70	28.84	30.86	Š	
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18,4	19:6	19.5	26.6	30.8		
	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	Q1	00 =
0.5 m -	0.14	-	The second	all'			-		U U		21.23	21.28	21.39	21.48	21.87	25.46	25.72	0.00	14.90	00 CFS
	8.8	27	16	15.6	25.3	22.1	24	30.1	23	26.9	18	17	46.5	16	16.5	19	23	35	1 1,00	
	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	317	378	379	Γ	/ B3
	0	0	0	0	0	0	0	0	0	0	3.23	4.28	4.89	5.48	5.37	0,46	2.72	0		
0.0ft			1-		1,4 20	No wat	1 1 1	1	1	1		10 3	122	1 4	No.	- He-		4 4		IDI 1 4.3

Exhibit 4 A-3-MRB-11-001 30 of 64

100	Veril 1		16.45	16.46	19.86	20.58	2124	21.80	21.87	21 90	22.07	22.41	ALC: NO. OF TAXABLE PARTY.	I COLORISE	- Ch. B.	A STAND	2024	1 and the second	
> 5.0 ft -	94	20.5	12.3	15.3	19.5	20	20	19.4	- 20	20	20.4	21	37.3	32.8	45.4	55.8	515	6123	
	445	140	447	440	100	100	1	400	422	434	Contrast.	470	4.3.7	1120	im	120	100	120	
	115	110	4.45	116	0.26	0.59	121	122	123	124	167	1 4 1	121	128	129	130	131	132	
	9.20	0	4.15	19.70	20.20	20.56	71.55	01.97	22.04	22.06	22.96	22.51	0	20.50	21.09		23 11	25.24	
	9.20	24.5	11.5	19.5	20.20	10.30	213	20.2	18	10.4	22.50	23.51	12	20	21.2	27.4	22.4	35.24	
4.5ft —	5	24.5		10.5	20		210	20.2	10	-13.4	22.0	21	42	23	31.3	31.4	1		15 Z
	135	136	137	138	139	140	141	142	143	144	145	746	141	148	149	e 150	151	152	
	0.2	0	4.94	10.2	10.22	7.00	0.25	7.07	4.07	2.00	0.36	2.57	25.24	7.5	80.0	22.90	7.03	0.24	
	9.70	24	10.24	10.13	15.25	20.50	21.42	22.00	22.00	10.9	23.12	23.15	23.21	20.21	32.00	32.09	34.00	34.30	
	9.2	24	12	11.2	10.2	-	Constant I	19	13	13'0	10	21.4	22.4	24.00	20.1	51.4	1 22.3	33.5	
40 0 -	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	111	112	
4.0 10	0.56	1200	1.24	0.99	3.03	3.3	3.42	22.07	3.08	2.4	1.12	2.35	2.87	3.35	3.38	7.49	2.76	7.48	F K SE
	9.46	10.03	16.07	10.20	\$09.00		17	22.07	22.11	22.41	23.00	23.70	23.49	ARC	36.41	32.14	33.78	34.80	
	1.1	11.5	14	10-	0	10.8	Щ	18.8	19	20	<u></u>	21.0	24.3	43.0	f i	¥9.4	31.4	31.4	
	175	176	177	178	179	180	81	182	183 🖶	184	185	186	187	188	189,	190	191	192	
	1.76	1.53	2.07	2.25	3 .	0	0	3.27	3.17 @	2.41	2.05	2.1	0.99	0	3.47	3.34	2.38	3.45	
3.5 m -	9.56	13.44	010	18.76		100		22.18	22.38	22.69	23.05	23.60	24.36	Caller .	32.60	32.6400	35.54	34.66	
	1.5	13	24.2	18.7	19.3	16.8		19	-20	20.6	21	24	23,4	44.5	28	28.4	29.2	20.2	
	196	197	198	199	200	201	212	203	204	205	206	207	208	209	210	211	212	213	
	2.06	0.44	0	0.06	14 0	0	0	2 4 8	2.38	2.09	2.05	1.6	0.96	0	4.6	4.34	4.14	14.88	
	10.88	11.27	12.40	-	-		1000		22.62	22.18	23.12	23.93	25.25		32.41	32.62	33.11	33.91	LATZ Ĕ
3.0 ft —	8	10.8	12.2	22	22.	15	15.5	20	21	20	21.3	11.1	23.9	41	44	21.6	the sea	29.2	Uot⊇ ≶
9	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	
Ш́	9.58	0.47	0.2	,0	0	0	0	1 Anna	1.62	2.78	1.82	1.23	1.33	Co.l	3.44	14.17	13.9	4.77	
U Щ		11.27		200	- Contract	CUURIN SPACE	20.02	The second	22.61	22.79	23.13	24.15	25,46	28.60	31.92	32,36	32.44	32.82	
	5.8	8.8	17.6	21.2	. 22.4	20.7	- 19	24	22	20	21.3	22	- 22	24.5	31	28	26.8000	28	Ĩªੈððšŭ⊈ ;
E 25ft -	237	238	239	240	241	242	243	244	-245	246	247	248	249	250	251	252	253	254	
	9.58	2.47	0	0	0	0	1.02	0 4	0.61	2.7.9	1.83	10.4	10.79	13.93	15.49	4.36	5.64	4.82	
	11.21	10.72		and and a	-	19.75	19.70	20.95	22.40	22.79	23,16	24.23	24.77	26.07	31.29	31.71	31.72	31.71	
D D	8	8.6	18.8	24	21.8	19.7	17.4	20	17	18	21	22	22	24.5	31	27-	26.2	27.1	
P P	257	258	259	260	261	262	- 263	264	265	266	267	268	269	270	271	272	273	274	
LL 20A	9.58	8.8	0	0	207	0:05	= 2.3	0.95	9.52	9.57	9.68	- 2.23	2.77	1.57	0.29	4.71_	5.52	4.61	
2.0 n —	10.80	11.26			ST- 1	19.29	19.62	19.70	20.25	22.46	23.33	24.11	24.54	25.07	30.00	31.16	31.18	31.18	ເ <u>v</u> ວັ ຊີດິດຊີ
	8	9.5	17.8	21.4	= 21	18.8	15.7	17.5	18	17.5	17.2	- 24	21.5	23	28,9	26	24.8	26.1	
	278	279	280	281	- 282	- 283	284	285	286-	287	288	289	290	291	292	293	294	295	
	2.8	8.8	0	0	0	0.49	10.87	11.26	11.18	8.72	9.66	3.11	3.04	2.07	1.1	5.16	6,38	5.08	
and a	9.67	10.55	300.00	16.60	17.70	18,64	19.60	19.68	1.1.20		The set	23.89	24.53	24.99	29.02	30,41	30.97	31.00	IA A MA
1.5ft —	7.6	9.5	15.9	16.5	17.5	17.5	15.7	17.5	24.3	- 21.1	21	18,8	21.6	22.3	27.6	26.6	24	- 24.6	<u>о</u> ш
	299	300	301	302	303	304	305	306	307	308	309	310	-311	312	313	314	315	316	
	2.07	1.05	6.08	7.31	8.51	10.09	3.9	2.18	- Byte	9	0	9.54	2.93	2.69	1.42	3.81	6.97	6.4	
	8.80	1	1	200	18.25	19.41	a statement	1.1		1		- 23.28	24.37	24.99	25.52	29.24	30.35	30.96	ш ¥
	7.4	11	16	18.7	18	19.4	33	29.6	22	22.7	22	21	21.7	20.6	- 21	27.5	26.4	23	0
1.0 ft -	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	1 E E
122410	1.4	0	0	0	0.25	0.01	0	0	0	- 0	0	2.28	8.98	4.39	4.52	1.74	3.95	7.96	15
	8.53		10000	- Alt	and the	310.50		1301		F	200	21.40	21.42	24.52	- 25.35	25.70	28.84	30.86	ĬŠ
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18.4	19:6	- 19.5	26.6	30.8	
	341	342	343	344	345	346	347	348	349	350	351	352	2 353	354	355	356	357	358	
0.50	0.13	0	0	0	0	0	0	0	0	0	0	4.4	5.42	8.39	5.75	6.2	2.24	0.06	Q100 =
0.510		2382	120-1-1	1	1350	- Total I	1 2 C -	-23		1	21.23	21.28	21.39	21.48	21.87	25.46	25.72		14 900 CES
	8.8	27	16	15.6	25.3	22.1	24	30.1	23	26.9	18	17	16.5	16	16.5	19	- 23	- 35	
	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	
	0	0	0	0	0	0	0	0	0	0	3.23	4.28	4.89	5.48	5.37	6.46	2.72	0	MB4
	100-1 00-00	1242		14	0-1	1000	A STATE	1	1	1.8		10			-		1 10	1	FXHIRIT 4 4
0.0 ft —		1 3 3	1		1 20	Mar all	100		here	1 1830		1000	1 42 1	14	646	100	4	A 1 10	
																			A

>50ft		12 4 1	18.05	18.05	19.76	20.37	20.90	21.37	21.45	21.52	21.85	22.33	N TANK	1	and a lot	we -	634	in a		
10.010	9.4	20.5	12.3	15.3	19.5	20	20	19.4	20	20	20.4	21	37.3	32.8	45.4	55.8	51.5	42.3	Ę	The log
	115	116	117	118	179	120	- 121	122	123	124	125	126	127	128	129	130	131	132	A	1
	0	0	5.75	2.75	0.26	0.37	0.9	1.97	7.45	- 1.52	1.45	1.33	0	20.50	21.09	0	23.11	25.24		ITA
	9.14	24.5	11.10	19.20	20.20	18 0	21.2	21.50	18	19.4	22.52	23.32	12	20	313	37.4	32.1	35.24		M
4.5ft —	435	126	127	10.5	420	440	210	142	142	1.4	445	ine	44	2.3	140	150	454	153	z	
	0 14	130	6.65	0.7	139	140	141	142	3 52	2 21	032	2 52	141	148	0.68	150	1.01	0.24	Ш	uu 👳
	9.60	-	18.34	19.75	20.22	20.41	20.75	21.35	21.55	21.79	23.04	23.74	25.21	28.21	32.08	32.89	34.06	34.98		ARI /D8
	9.2	24	15	17.2	16.2	17	18 -	19	19	19.8	22	21.4	22.4	24.86	28.7	31,4	32.9	33.5	A A	NAN
1000	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172		0 L.
4.0 ft —	0.4	0	3.34	2.55	4.02	3.41	2.75	2.35	2.55	1.99	1.04	2.34	2.81	3.35	3.38	1.49	1.16	1.48		FEE
	9.25	12.95		20.07	20.23	20.40	20.66	21.34	21.58	22.08	22.94	23.68	25.49		32.47	32.74	33.78	34.85		I L
	7.7	11.5	20	16-	Var 16	16.8	17	18.8	19	20	21	21.6	24.5	45.6	29	29.4	31.4	31,4	L L L	ш
	175	176	177	178	179	780	181	182	183 -	184	185	186	187	188	189	190	191 1	192	14 QE	
250	1.55	1.45	0	4.07	4.23	3.6	3.66	2.54	2.58	2.08	1.94	2.08	0.99	0	3.47	3.34	2.38	3.45	<u>s s d ö</u>	
3.9 n —	9.45	13.05	24.2	19.00	10.22	20.43	20.74	21.30	21.69	22.40	22.94	23.37	24.33	44.5	32.60	28.4	33.34	34.00	IES 1 0	
	100	107	100	100	200	204	303	10	20	20.0	21	207	23.4	200	240	20.4	20.4	1000	lい い の た の に	
	190	0.03	198	11	0.92	201	374	203	189	186	194	1.57	0.95	209	46	434	4.14	14.88	IAAFÖ	z
	10.91	11.48	13.24	10	0.02	0.00		21.39	22.20	22.64	23.04	23.91	25.22		32.41	32.62	33.11	33.98	I S Z E O	<u> </u>
30ft -	8	10.8	12.2	22	22.9	15	15.	20	21	20	21.3	22.7	23.9	41	29	27.6	28	29.2		LA1
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	151 51 51 E	~ ⁴
	9.6	0.68	1.04	0	0	0	0	1.39	1.2	2.64	1.74	1.21	1.32	0000	3.41	14.77	13.9	4.78	I≝₹6⊑	
С Ш		11.43			5		20.41	- NAREL	22.35	22.68	23.07	24.18	25,54	28.55	31.92	32.36	32.44	32.82	IS A F A	H H
	5.8	8.8	17.6	21.2	22.4	20.7	19	24	22	20	21.3	22	- 22	24.5	31	28	26.8000	28	<u>o Ŧ ĕ z</u>	M A H
1 2.5 ft -	237	238	239	240	_ 241	242	243	244	- 245	246	.247	248	249	250	251	252	253	254	פֿֿֿיַםַ≾	
E C	9.6	2.63	0	0	0 0	0	1.47	20.04	0.35	2.68	- 1.11	10.49	10.94	13.92	15.49	4.36	5.64	4.82	Ҝ҇҅҄҅҄҅ヮ҄ヿӄ	STATIO
d	11.22	86	18.8	24	218	19.95	17.4	20.91	17	18	20,16	24:23	24.11	26.03	31.29	37.71	26.2	27	IE으삪히	Ë N E O
8	257	250	250	24	264	262	202	20	1 200-	100	1007	260	260	270	274	272	270	A ST	N E C O	
	96	8.82	0	200	201	0.23	203	204	9.51	0.55	9.68	2.23	2 77	1.55	0.29	471	5.52	4.61	l∛ ŏ⊡	
2.0 ft —	10.82	11.28	4 4	MES	ST-	19.41	19.66	19.74	20.25	22.45	23.33	24.11	24.53	25.07	30.00	31.17	31.19	31.19		A R R A R
	8	9.5	17.8	21.4	= 21	18.8	15.7	17.5	18	- 17.5	17.2	1- c-21 -	21.5	23	28.9	26	24.8	26.1	lő Ľ	2002
	278	279	280	281	282	- 283	284	285	286.	287	288	289	290	291	292	293	294	295	N R	5
	2.82	8.82	0	0	0	0.61	10.82	11.26	11.17	8.11 -	9.65	3.11	3.03	2.07	1.1	5.17	6.39	5.09	L L L L	19
1.5.0	9.68	10.56	1.1.1.1	16.60	17.73	18.66	19.65	19.73	-		1-5-1	23.89	24.53	24.99	29.02	30.42	31.00		Ă Ż	
1.5 m -	1.6	9.5	15.9	16.5	17.5	17.5	10.1	11.5	24.3	- 21.1	21	18.8	21.6	22.3	21.6	26.6	4	- 24.6	0 8	
	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	345	316	- A	
	2.08	1.00	0.09	1.52	18.07	10.7	3.95	2.2.5	Card I.	1		9.04	2.93	2:09	25.82	3.82	30.35	30.07	B	
	74	11	16	18 7	18	19.4	33	29.6	22	27	22	21	217	20.6	- 21	27.5	26.4	23	0	
108	320	221	222	222	324	225	326	227	228	220	220	321	222	222	2 234	225	2014	227	R	
1.010	1.41	0	0	0	0.26	0.02	0	0	0	- 0	0	2.28	8.98	4.39	4.52	1.75	3.95	7.97	LK LK	
	8.54	1-4	alles 37	230	STOP TO A		-				1	21.40	21.42	24.52	- 25.35	25.70	28.84	30.86	Ň	
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18.4	19.6	19.5	26.6	30.8	_	
	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	01	00 -
0.5 ft -	0.14	0	0	0	0	0	0	0	0	0	0	4.4	5.42	8.39	c 5.75	6.2	2.24	0.06		
	0.0	27	-	45.0	25.2	2 22 4	2 20	20.4	22	20.0	21.23	21.28	21.39	21.48	21.87	25.46	25.72	25	14,90	U 675
	8.8	21	16	15.6	25.3	22.1	24	30.1	23	26.9	18	II	16.5	10	10:5	State -	23	35		
	362	363	364	365	366	367	368	369	370	3/1	3/2	3/3	314	315	376	A second	378	379	M	IB5
	0	-		0	0	U	u	0	0	0	3.23	4.20	4.09	3.40	101	0.40 %	2.12	0	ЕУШ	BIT 1 5
0.0 ft			1.	- A	-1 50	the same			Tra	1.71	616	1	1	19	1000	1. 19	1			

Exhibit 4 A-3-MRB-11-001 32 of 64

>5.0 ft	540	N. CO	17.52	17.52	19.70	20.25	20.63	21.15	21.24	21.35	21.77	22.30		1 APRIL	1000	and in	A Chai	in a		
	9.4	20.5	12.3	15.3	19.5	20	20	19.4	20	20	20.4	- 21	37.3	32.8	45.4	55.8	51.5	42.3	ļ ļ	Th B
	115	116	117	118	179	120	- 121	122	123	124	125	126	127	128	129	130	131	132	Ā	1
	9.11	0	17.60	18.81	20.07	20.03	0.03	21.09	21.25	21.35	22.89	23.50	U	30.49	31.97		31.09	35.23		TITA
200	9	24.5	11.5	18.5	20	18.9	21.3	20.2	18	19.4	22.6	21	42	29	31.3	37.4	33.1	35		MA
4.5 ft —	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	z Ľ	
	0.11	0	6.1	0.31	0.07	1.13	0	0.89	3.25	1.98	0.29	2.5	0	1.49	0.67	0	0.99	0.23	₩	ш 👷
	9.51		17.82	19.30	19.78	19.95	20.31	20.99	21.25	21.55	22.97	23.71	25.20	28.19	32.06	32.87	34.04	34.94		AR VD8
	9.2	24	15	17.2	16.2	17	18	19	19	19.8	22	21.4	22.4	24.86	28.7	31.4	32.9	33.5	AF N	NA
10.0	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172		9 L
4.0 n —	0.31	0	2.82	2.1	3.58	2.95	2.31	1.99	2.25	1.75	0.97	2.31	2.8	3.33	3.36	1.47	1.14	1.44		FEI FEI
	9.06	12.70	- 20	19.65	19:19	19,93	20.14	20.91	21.24	21.81	22.79	23.64	25.49	15.0	3Z.45	32.61	33./6	34.82		ΞĽ
	1.1	11.0	20	10-	10	0.01	11	10.0	19	20	ZI	21.0	24.3	43.0	29	£9.4	31.4	-31,4	비싼 교의	ш
	1/5	1/6	1//	7/8	2 70	780	787	782	783	101	185	186		788	789	221	797	192	A QE	
3.5ft -	9.34	1.2		19.46	19.77	19.95	20.19	20.87	21.35	22.03	22.77	23.41	24.20	v	32.58	32 7900	33.32	34.60	$\mathbb{S} \otimes \mathbb{C} \times \mathbb{C}$	
10000	7.5	13	24.2	18.7	19.3	16.8	17	19	-20	20.6	21	22	23.4	44.5	28	28.4	29.2	29.2		
	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	N L N R	
	1.84	0	0	0.76	0.47	3.15	3.19	1.87	1.35	1.43	1.77	1.41	0.8	0	4.58	4.32	4.12	14.87		Z
	10.98	11.29	12.88		1 - 1	0.0		210	1.000	112			1	ALC: N	32.37	32,58	33.07	33.96		
3.0 ft -	8	10.8	12.2	22	22.5	15	15.5	20	21	20	21.3	22.7	23.9	41	29	27.6	28	29.2		-AV
Z	217	218	219	220	227	222	22.	224	225	226	227	228	229	230	231	232	233	234		۳ م
Ш О	9.72	0.49	0.68	0	0	0	0	0.90	0	0	0	112	0	0000	3.07	14.74	13.89	4.76	IE S 6 Z	
Ŭ L	5.9	11.39	17.6	212	F 22.1	20 7	20.24	2000	22.80	23.13	23.49	24.43	25./1	28.80	31.89	32.34	02.42 06.901	32.80		
E	3.0	0.0	17.0	21.2	22.4	20.7	13	24	LL	- 20	210	LL	44		are	LO	PARA	20		ЩЧ, Ц
°_ 2.5 ft −-	972	259	239	240	241	242	1.243	244	- 245	240	219	10.69	17.06	14.18	15.46	4 34	5.62	204 d 8	и К С Щ С С Щ С С	
ā	11.32	10.82	Contraction of the second			19.94	19.97	21.15	22.68	23.12	23.48	24.46	24.97	-26.22	31.29	31.69	31.73	31.70	I A O L A	AT AT O
	8	8.6	18.8	24	21.8	19.7	17.4	20	17	18	21	22	22	24.5	31	27	26.2	27.1		Ë
P	257	258	259	260	261	262	263	264	265 -	266	267	268	269	270	271	272	273	274		PLC F A
20.4	9.72	8.93	0	0	07.	0.24	2.57	1.15	9.76	9.82	9.66	2.46	2.97	1.72	0.29	4.69	5.53	.4.6		×99×
2.0 m -	10.90	11.35	2.000	Contraction of the second	51- 3	19.63	19,91	19.96	20.46	22.70	23.54	24.28	24.66	25.15	30.00	31.15	31.18	31.18	S L L	A R R A A R R A
	8	9.5	- 17.8	21.4	= 21	18.8	15.7	17.5	18	- 17.5	17.2	21	21.5	23	28.9	26	24.8	26.1		
	278	279	280	281	- 282	283	284	285	286.	287	288	289	290	291	292	293	294	295		66 6 66
	2.9	8.93	0	16.70	17 79	0.83	11.08	11.52	11.42	8,33	9.83	3.28	3.16	2.15	7.7	3.15	6,38	5.08		1. 20
1.5ft -	7.6	95	15.9	16.5	17.5	17.5	15.00	17.5	213	21.1	21-	18.8	21.6	22.3	27.6	26.6	24	246		
	200	300	201	202	202	204	305	306	207	208	300	310	211	212	212	21	215	346		
	2.15	1.13	6.22	7.49	8.71	10.36	4.18	2.45	0	0	0	9.67	3.05	2.74	1.42	3.81	6.98	6.4	A LO	
	8.87		16.04	-	18.35	19.52	all and the	1.17	1			23:37	24.48	25.04	25,54	29.24	30.34	30.95		
	7.4	11	16	18.7	18	19.4	33 -	29.6	22	22.7	22	-24	21.7	20.6	- 21	27.5	26.4	23		
1.0ft —	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	L K	
	1.47	0	0.04	0	0.35	0.12	0	0	10	- 0	0	2.37	9.08	4.44	2.4.54	1.74	3.94	7.95	ō	
	8.57	20	1 24.4	10.7	Sec.	18.23	6	1000	22	22	10.0	21.46	21.48	24.57	25.39	25.73	28.84	30.85	Σ	
	8.4	20	24.1	19.2	ZIN	18.2	23	28.8	23	33	19.8	H	10	18.4	1910	19.5	20.0	30.8		
0.22	347	342	343	344	345	346	341	348	349	350	351	352	353	354	305	356	351	358	Q10	0 =
0.5 ft -	0.11		1.2		1	0.03	0		-		21.29	21.34	21.45	21.53	21.92	25.50	25.74	0.05	1/ 000	CES
	8.8	27	16	15.6	25,3	22.1	24	30.1	23	26.9	18	17	16.5	16	16.5	1 19	23	35	14,300	
	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	l . <i>.</i> .	
	0	0	0	0	0	0	0	0	0	0	3.29	4.34	4.95	5.53	5.42	6.5	2.74	0		80
008 -		20	1		1. 2. 19	10 200	-	1	1	100	PERF A	1. 1. 1	Contract of	and a	200	N. M.	2.0	2012	EXHIE	BIT 4.6
0.010			Car In		10 20	1 Y & 2 8			1 to	10 mm	1.1714	1000	1. 1 -	1	Sec. 1	11-12-1	4	1 14		-

Exhibit 4 A-3-MRB-11-001 33 of 64

>5.0 ft -	9.4 115 0	20.5 116 0	17.27 12.3 117 4.97	17.28 15.3 118 1.98	19.80 19.5 179 9.3	20.36 20 120 0.36	20.98 20 121 0.98	21.49 19.4 122 2.09	21.56 20 123 1.56	21.63 20 124 1.63	21.96 20.4 125 1.56	22.44 21 126 1.44	37.3 127 0	32. 8 128 0	45.4	55.8 130 0	51.5 131 0	42.3 132 0	LANT	ACE GROUP
4.5 ft —	9.10 9 135	24.5 136	17.32 11.5 137	18.71 18.5 <i>13</i> 8	20.11 20 139	20.32 18.9 140	21.38 21.3 141	21.51 20.2 142	21.63 18 143	21.72 19.4 744	23.01 22.6 145	23.65 21 146	42 147	30.50 29 148	31.98 31.3 149	37.4 150	34,10 33,1 151	35.23 35 152	ENT P	MALL
	0.1 9.47 9.2	0 24	5.82 17.51 15	0.21 18.99 17.2	0.11 19.49 16.2	1.42 20,09 17	0.08 20.98 18	1.31 21.55 19	3.63 21.64 19	2.32 21.87 19.8	0.41 23.21 22	2.65 23.97 21.4	0 25.23 22.4	1.5 28.15 24.86	0.68 32.07 28.7	0 32.87 31,4	34.05 32.9	0.23 34.95 33.5	EATM	ONS ARE T NAVD88
4.0ft —	0.27 8.92 7.7	0 12.55 11.5	2.51	1.79 19.35 16-	3.29 3.29 5019.43	16.8	2.98	2.55 21.56 18.8	2.64 21.64 19	2.07 21.95 20	1.21 23.18 21	2.57 24.00 21.6	2.83 25.80 24.5	3.29 45.6	3.37 32.46 29	1.47 32.73 29.4	1.15 33.76 31.4	1.45 34.83 31,4	ER TR T PRC	ELEVATI IN FEE
35ft —	175 1.22 9.26	176 1.05	177	178 3.35 19.12	179 3.43 19,11	780 0	181 0	182 2.76 21.61	783 5 2.64 5 21.64	184	185 2.18	186 2.4	187 1.3	188 0	189 3.46 32.59	190 3.33 32.E80	191 2.36 33.32	192 3.43 34.61	'EWAT SIS . PLAN	
	1.5 196 1.76 10.98	13 197 0 11,18	24.2 198 0 12.52	18.7 199 0.42	19.3 20 0.0	16.8 0 201 0	2/2	19 203 261	204 204 1.64	20.6	21 205 0 23,80	22 201 0 24,35	208 0 25,56	44.5 209 0	28 210 4,59 32,40	28.4 211 4.33 32.61	29.2 212 4.12 33.08	29.4 213 74.87 33.96	WAST NALY I FULL	NOI
3.0 ft — ₽	8 217 9.74	10.8 218 0.38	12.2 219 0.32	22 220 0	22.9 221 0	15 222 0	15.5 223 0	20 224 0	21 225 0	20 226 0	21.3 227 2.5	22.7 228 1.65	23.9 229 1.66	41 230 0	29 231 3,4	27.6 232 14.76	28 233 13.89	29.2 234 4.76	TRICT ARD / S-WITH OD BA	ELEVAT
ЧЭ ЭЭ ЭЭ Н 2 <i>5</i> ft —	5.8 237 9.74	11.37 8.8 238 2.57	17.6 239	21.2 240	22.4 241	20.7 242	20.34 19 243 1.34	24 244	23.00 22 245	23.38 20 246 3.78	23.71 21.3 247 241	24.31 22 248	25.56 22 249	28.76 24.5 250	31.91 31 251 15.48	32.36 28 252 4.36	253 5.62	32.81 28 254	RY DIS D HAZ ATION D FLO	LEGE SURFACE SURFACE ION R N DEPTH
OD DEP1	11.33 8 257	10.82 8,6 258	18.8	24 260	21.8	20.04 19.7 262	20.06 17.4 263	21.27 20 264	22.85 17 265 -	23.36 18 266	23,55 21 267	24.36 22 268	24.83 22 269	26.08 24.5 270	31.29 31 271	31.70 27 272	31.71 26.2 273	31.71 27.1 274	ANITAI FLOO ELEV/ AN	WATER { ELEVAT NUMBEI FLOOD D
이글 2.0 ft —	9.74 10.91 8	8.94 11.36 9.5	0 - 17.8	0 21.4	0 21	0:34 19.72 18.8	2.66 19,98 15.7	1.27 20.05 17.5	9.77 20.48 18	9.85 22,70 17,5	9.56 23.51 17.2	2.36 24.21 21	2.83 24.60 21.5	1.58 25.10 23	0.29 30.00 28.9	4.7 31.15 26	5.57 31.18 24.8	4,67 31.18 26.1	Lood S,	MAX GRID GRID MAX
1.5ft —	278 2.91 9.76 7.6	279 8.94 10.63 9.5	280 0 15.9	287 0 16.70 16.5	282 0 17.80 17.5	283 0.92 19.05 17.5	284 11.11 19.95 15.7	285 11.54 20.03 47.5	286- 11.42 24.3	287 8.33 21.1	288 9.81 21	289 3.21 23.98 18.8	290 3.1 24.59 21.6	294 2.1 25.01 22.3	292 1.1 29.02 27.6	293 5.15 30.41 26.6	6,38 30.97 24	295 5.08 31.00 24.6	CAYU(EAR F	20.99 19 203 7,99
	299 2.16 8.88	300 1.13	301 6.23 16.05	302 7.51	303 8.73 18.38	304 10.39 19.55	305 4.25	306	307	308	309	310 9.63 23.33	311 2.99 24.43	312 2.71 25.01	313 1.42 25.53	314 3.81 29.24	345 6.97 30.34	316 6.4 30.96) ВАҮ 100-Ү	
1.0ft —	7.4 320 1.48 8.58	11 321 0	16 322 0.05	18.7 323 0	18 324 0.38	19.4 325 0.15 18.26	33 326 0	29.6 327 0	22 328 0	22.1 329 0	22 330 0	21 331 2.33 21.44	21.7 532 9.04 21.45	20.6 333 4.41 24.55	334 4.53 -25.37	27.5 335 1.74 25.71	26.4 336 3.94 28.84	23 337 7.96 30.85	AORRO	
0.5ft —	8.4 341 0.18	26 342 0	24.1 343 0	19.2 344 0	21.1 345 0	18.2 346 0.06	23 347 0	28.8 348 0	23 349 0	33 350 0	19.8 351 0	17 352 4.44	16 353 5.45	18.4 354 8.43	19.6 355 5.77	19.5 356 6.21	26.6 357 2.24	30.8 358 0.05	Q10	0 =
	8.8 362	27 363	16 364	15.6 365	25.3 366	22.1 367	24 368	30.1 369	23 370	26.9 371	21.26 18 372	21.31 17 373	21.42 16.5 374	21.50 16 375	21.90 16.5 376	25.48 19 377	25.73 23 378	35 379	14,900 M	в7
0.0 ft		20				No. 23		0		1	3.20	4.31	4,32	3.3	3	0,40	3		EXHIE	BIT 4.7

Exhibit 4 A-3-MRB-11-001 34 of 64

50.0			17.47	17.47	19,70	20.26	20.67	21.18	21,29	21.42	21.88	22.41		1-19-11	- D. S.	Set State	1 Anna State		
>0.0 m -	9.4	20.5	12.3	15.3	19.5	20	20	19.4	20	20	20.4	- 21	37.3	32.8	45.4	55.8	51.5 42	.3	NOT IN
	115	116	117	118	179	120	- 121	122	123	124	125	126	127	128	129	130	131 1.		n e
	0	0	5.17	2.17	0.2	0.26	0.67	1.78	1.29	- 1.42	1.48	1.41	0	0	0.0	0	23.40	1 2	ITAC NO.
	9.10	24.5	11.54	18.79	20.08	20.01	24.3	20.2	21.28	21.4/	23.00	23.66	12	30.50	31.98	37.4	34,10 35.		MA
4.5 ft —	125	126	127	10.5	120	140	21.5	142	1/0	144	145	146	44	140	140	450	154 1		
	01	130	6.04	0.29	0.08	140	0	0.9	3.28	2 07	04	2.66	141	148	0.68	150	131 0		ш 88
	9.50		17.76	19.25	19.73	19.94	20.26	20.94	21.25	21.64	23.19	23.98	25.23	28.15	32.07	32.87	34.05 34		AR VD8
	9.2	24	15	17.2	16.2	17	18 -	19	19	19.8	22	21.4	22.4	24.86	28.7	31.4	32.9 33		NAN
10.0	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171 1		
4.0 n —.	0.3	0	2.76	2.05	3.53	2.94	2.26	1.94	2.25	1.84	1.19	2.58	2.83	3.29	3.37	1.47	1.15 1.		I FE
	9.03	12.08	20	19.59	19:12	19,93	20.23	20.90	21.18	21.73	23.18	24.00	25.81	45.6	32.40	32.13	33.76 34.		
	175	176	177	170	170	100	101	10.0	102 0-	101	105	106	107	40.0	100	20.4	101		
	1.33	1.18	0	3.59	3.72	780	323	2.1	2.18	1.73	2.18	2.4	1.31	0	3.46	3.33	2,36 3.		
3.5 ft —	9.31	1 1 1 1 1 1	-	19.39	19. 8	47.9		20.90	21.17	El-			J YI	NAL OF	32.59	32.780	33.32 34		
	7.5	13	24.2	18.7	19.3	16.8	1	19	-20	20.6	21	22	22	44.5	28	28.4	29.2 29		
	196	197	198	199	20	201	202	203	204	205	-	207	208	209	210	211	212 2		
	1.81	0	0	0.69	0.3	0	0	-	1.17	0	0	0	25.50	0	4.59	4.33	4.12 14	₩ X X N A	NO
	10.50	10.8	12.70	22	22.0	15	15.5	20	21	20	21.3	24.55	23.9	41	29	27.6	28 29		АТІ
3.0 m	217	218	210	220	221	222	223	274	225	226	227	228	229	230	232	222	233 2		E<
	9.74	0.47	0.5	0	0	0	0		0	0	2.5	1.65	1.66	0 0	3.4	14.76	13.89 4.	A A A A	
Z W		11.39			1- 5-	COMMA POINT	20.34		23.00	23.38	23.71	24.31	25.56	28.76	31.91	32.36	32.43 32.	S N H H	Ш Ш
<u> 9</u>	5.8	8.8	17.6	21.2	22.4	20.7	- 19	24	22	20	21.3	22	22	24.5	31	28	26.80 2	Ĩ₽₽₹₹X	E E
T 2.5ft	237	238	239	240	_ 241	242	243	244	- 245	246	247	248	249	250	251	252	253 2.	A P D Y	- NO - A
Τd	9.74	2.59	0	0	0	20.04	1.34	21.27	22.95	3.38	2,41	10.61	10.92	74.72	75.48	4.36	5.63 4.	H H O Z A	ATIC ER
DE	8	8.6	18.8	24	21.8	19.7	17.4	20	17	18	21	24.30	24.05	74.5	31	27	26.2 27	ME 9 은 요	
Q	257	258	259	260	261	262	263	264	265 -	- 266	- 267	268	260	270	271	272	278	N I I I I I I I I I I I I I I I I I I I	PU ELE
ŏ	9.74	8.94	0	0	107	0:34	2.66	1.27	9.77	9.85	9.56	- 2.36	2.83	1.58	0.29	4.71	5.52 4.	S N	X E E X
표 2.0 ft —	10.91	11.36	the second	11-2	54 1	19.72	19,98	20.05	20.48	22,70	23.51	24.21	24.60	25.10	30.00	31.16	31.19 31.		A R R A A A A A A A A A A A A A A A A A
	8	9.5	17.8	21.4	= 21	18.8	15.7	17.5	18	- 17.5	17.2	- 21	21.5	23	28.9	26	24.8 26	<u>ло ш</u>	1.06
	278	279	280	281	282	- 283	284	285	286	287	288	289	290	291	292	293	- 294 - 29		66 6 68
	9.76	8.94	0	16.70	17.80	19.05	19.95	20.03	11.4.5	8.33	9.87	23.98	24 59	25.01	7.7	30.42	0,39 3.	₩E ŏ	20
1.5ft -	7.6	9.5	15.9	16.5	17.5	17.5	15.7	47.5	24.3	21.1	21	18.8	21.6	22.3	27.6	26.6	24 - 24	<u>ا</u> د	
	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315 3		
	2.16	1.13	6.23	7.51	8.73	10.39	4.25	2.53	. 0	9	0	9.63	2,99	2.71	1.42	3.82	6.99 6.		
	8.88		16.05	40.7	18.38	19.55		00.0		1 40 7		23.33	24.43	25.01	25.53	29.24	30.35 30.		
100	1.4	11	16	18.7	18	19.4	55	29.6	22	22.1	22	21	一般	Z0.6		27.5	20.4 2		
1.0 ft	320	321	322	323	324	325	326	327	328	329	330	331	332-	333	334	335	336 3.		
	8.58	0	0.05		0.50	18,26			1 1		0	21.44	21.45	24.55	-25.37	25.71	28.84 30		
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18.4	19.6	19.5	26.6 30	.8	
	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357 3.		no _
0.5ft -	0.18	0	0	0	0	0.06	0	0	0	0	0	4.44	5.45	8.43	5.77	6.21	2.24 0.		
	0.0	37	200	45.0	25.2	1 500 1	24	20.4	22	200	21.26	21.31	21.42	21.50	21.90	25.48	25.73	14,90	JCFS
	8.8	21	16	15.6	23.3	22.1	24	30.1	23	26.9	18	11	16.5	16	10.0	1000	25 3	0	
	362	363	364	365	366	36/	368	369	310	311	312	431	492	515	316	6.48	273 3	🎽 🛛 M	38
		13 Contraction	1	-	1 - 1 1	1 2 2 2 3				No.	5.20	not	4.02	0.0				EXHIF	SIT 4.8
0.0 ft —		The second	2	1	15 30	WY X 2	1. 1.		The	0.00 24		the second	131	1 -	1 Table	and the second	a		

Exhibit 4 A-3-MRB-11-001 35 of 64

>5.0 ft -	9.4	20.5	18.08 12.3	18.09 15.3	19.79 19.5	20.41 20	20.95 20	21.43 19.4	21.51 20	21.58 20	21.88 20.4	22.34	37.3	32.8	45.4	55.8	51.5	42.3	Ļ	ROUP
	115 0	116 0	117 5.78	118 2.79	179 0.29	120	- 121 0.95	122 2.03	123	124	125	126 1.34	127 0	128	129	130 0	131	132	N N	ACE G
	9.14	24.5	18.18	19.22	20,20	20.51	21.32	21.43	21.59	21.68	22.92	23.52	42	30.50	31.98	37.4	34.11	35.24	T PI	WALL
4.5ft —	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152		
	0.14 9.60	0	6.68 18.36	0.72	0.2	1.61 20.50	0.02	1.23	3.59	2.28	0.32	2.52	0 25.21	1.5	0.68	0 32.89	1.01	0.24		ARE VD88
	9.2	24	4.15	17.2	16.2	17	18	19	19	19.8	22	21.4	22.4	24.86	28.7	31,4	32.9	33.5	PF	DNS NA
4.0 ft —	155	156	157	758 2.56	4.05	160	2.84	162	163	2.06	1.05	166 2.34	167	168	169 3.38	170	1.16	1.48	NT NT	/ATI0
	9.25	12.96	20	20.08	20.24	20.49	20.83	21.45	21.69	22.15	22.96	23.69	25.49	15.6	32.47	32.74	33.78	34.85	หเ	
	175	176	177	178	179	180	181	182	183 -	184	185	186	187	188	189	190	191	192	ATE DTF	
358 -	1.55	1.46	0	4.08	4.24	3.69	3 83	2.65	2.69	2.15	1.96	2.09	0.99	0	3.47	3.34	2.38	3.45	N 100 100	
5.511	7.5	13	24.2	18.7	19 3	16.8	7	19	-20	20.6	21	22	23.4	44.5	28	28.4	29.2	29.2	YSI D F	
	196	197	198	199	200	0 201	202	203	204	205	206	207	208	209	210	211	212	213		Z
	10.90	11.47	13.23		0.0		and the		22.44	22.69	23.06	23.92	25.23		32.41	32.62	33.11	33.98	D A A	IOIT
3.0ft -	217	10.8	12.2	220	221	15	15.5	20	21	20	21.3	228	23.9	230	- 731	21.6	733	29.2	л С С С П С	EVA
ENC	9.58	0.67	1.03	0	0	0	0		1.44	2.69	1.76	1.22	1.33	0.0	3.47	14.77	13.9	4.78	TAF H H	
LEG	5.8	8.8	17.6	21.2	22.4	20.7	19.98	24	22.45	22.71	23.09	24.15	23.40	28.60	31.92	28	26:800	28		H ACE
E 25ft -	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	Z − Z	
DEF	9.58	10.76	U	1		19.73	19.65	20.90	22.33	22.72	23,13	24.23	24.77	26.07	31.29	4.30	31.72	31.71	NO AF	ER S /ATI BER D D
QQ	8	8.6	18.8	24	21.8	19.7	17.4	20	17	18	21	22	22	24.5	31	27	26.2	1 27.4	PL ATI	
	9.58	258 8.81	0	260	207	0:03	2.25	0.9	9.51	9.55	9.68	2.23	2.17	1.57	0.29	4.71	5.52	4.61	S A E V	
20n -	10.81 8	11.27	17.8	214	21	19.25	19,58	19.65	20.23	22.45	23.33	24.11	24.53	25.07	30.00	31.16	31.18	31.18	DS EL	A B B A A B B A A B B A A B B B A A B B B A A B B B A A B B B A A B B B A A B B B A B
	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	ŭ g	66 0 0
	2.81	8.81	0	0	0	0.45	10.78	11.23	11.16	- 8.17 -	9.65	3.11	3.03	2.07	1.1	5.16	6.38	5.08	N −	20.1
1.5ft —	7.6	9.5	15.9	16.5	17.5	17.5	15.7	17.5	24.3	21.1	21-	18.8	21.6	22.3	27.6	26.6	24	24.6	E C	
	299 2.07	300	301 6.08	302	303 8.49	304	305	306	307	308	309	310	2.93	312	312	314	315	316	AY AR	
	8.80		10-1-	40.7	18.23	19.41	-	20.0	22	67	22	23.28	24.37	24.99	25.52	29.24	30.35	30.96	O B ≺E	
1.0ft -	320	321	322	323	324	325	33	327	328	329	330	331	132	333	334	335	336	337	RR(00-	
22.010	1.4	0	0	0	0.23	0.01	0	0	0	- 0	0	2.28	8.98	4.39	4.52	1.74	3.95	7.96	POL É	
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18.4	19.6	- 19.5	26.6	30.8	2	
222	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	Q1	00 =
0.5ft -	0.14	231-	7		12 2 4				0		21.23	21.28	21.39	21.48	21.87	25,46	25.72	0.00	14,90	0 CFS
	8.8	27	16	15.6	25.3	22.1	24	30.1	23	26.9	18	17	16.5	16	16.5	19	23	35	*	
	0	0	0	0	0	0	0	0	0	0	3.23	4.28	4.89	5.48	5.37	6.46	2.72	0	N	/B9
0.0 ft		-12	(SA)		12	1. 20	11	1	1	13	111	in the second	20-	74	12	N.	3	100	EXH	IBIT 4.9

Exhibit 4 A-3-MRB-11-001 36 of 64

		100 mg	18 15	18 15	19 78	20 37	20.97	21 30	21.40	21.47	21.93	22 22	2	Let a			1000	States in		S.
> ^{5.0 ft} -	9.4	20.5	12.3	15.3	19.5	20.01	20.07	19.4	21.40	20	20.4	-21	37.3	32.8	45.4	55.8	51.5	42.3	F	
	115	116	117	118	179	120	-121	122	123	124	125	126	127	128	170	130	131	132	Ż	h E
	0	0	5.85	2.85	0.28	0.37	0.87	1.9	1.4	- 1.47	1.43	1.32	0	0	0.8	0	0	0	₹ z	ACE
	9.15	Distant.	18.26	19.27	20,21	20.50	100	21.29	21.46	21.56	22.91	23.52	20050	30.50	31.98		34.11	35.24	PI O	ALL
150	9	24.5	11.5	18.5	20	18.9	21.3	20.2	18	19.4	22.6	21	42	29	31.3	37.4	33:1	35		×
4.9 n —	135	136	137	138	139	140 -	141	142	143	144	145	146	147	148	149	150	151	152		
	0.15	0	6.76	0,77	0.21	1.6	0	1.09	3.46	2.16	0.31	2.52	0	1.5	0.68	0	1.01	0.24		88 88
	9.62		18.44	19.84	20.32	20.50	20.69	21.22	21.48	21.75	23.03	23.74	25.21	28.21	32.08	32.89	34.06	34.98	E O	AF S
	9.2	24	10	17.2	16.2	1 V	18	19	19	19.8	22	21.4	22.4	24.86	28.1	31.4	32.9	33.5	PH N	NON
40 0 —	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172		
4.0 10	0.42	12.00	3,44	2.04	4.12	EG 3.5	2.69	2.22	2.48	7.95	7.03	2.34	2.87	3.35	3.38	7.49	7.70	7.48	FZ	EVA FE
	7.7	11.5	20	16-	16	16.8	20.00	18.8	21,01	22.03	21	23.00	24.5	45.6	29	50.14	31.4	34.03	<u> </u>	
	475	476	477	170	170	100	101	10.0	102	104	105	106	107	400	100	100	101	102	비면	_
	158	110	0	4.17	4 33	3.72	3 66	2 38	2 51 3	2.05	103	2.08	-0.99	166	347	3 34	238	345	O A	
3.5ft —	9.45	13.06	A DESCRIPTION	19.90	20.33	20.55	20.67	21.22	21.85	22.44	22.94	23.56	24.35	¥.	32.60	32.740	33.34	34.65	ରୁ ହ ତ	
and the second	7.5	13	24.2	18.7	19.3	16.8	17	19	-20	20.6	21	22	23.4	44.5	28	28.4	29.2	29.2	ЩСË	
	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	S L B	
	1.95	0.06	0	1.2	1.03	3.75	3.7	2.22	1.85	1.84	1.94	1.56	0.95	0	4.6	4.34	4.14	14.88	S N N	z
	10.90	11.52	13.33	1			Ser.	21.47	22.19	22.65	23.04	23.91	25.23	100.00	32.41	32.62	33.11	33.98		0E
3.0 ft —.	8	10.8	12.2	22	22.	15	15.5	20	21	20	21.3	22.7	23.9	41	29	27.6	28	29.2	5 C U	LA/
	217	218	219	220	22:	222	22.	224	225	226	227	228	229	230	231	232	233	234	SIC 5	۰Ü
Z Ш	9.58	0.72	1.13	0	0	0	0	1.4.1	1.19	2.65	1.74	1.21	1.33	200	3.41	14.77	13.9	4.78	E S E	
() 	EO	11.45	17.0	24.2	5 22.4	WINDER WEIM	10	and a	22	22.69	23.07	24.19	25.54	20.01	31.92	32.36	0Z.44	32.82		H U
	3.0	0.0	17.0	21.2	22.4	20.7	a land	24	12	20	21.3	LL	24	24.3	an	20	PATION	20	으로 추	Ŭdr T
± 2.5 ft -	231	238	239	240	241	242	243	244	245	246	177	248	249	12.00	251	252	253	254	Z D Z	
JEF JEF	11.21	10.77	0		ALE Y	Suffrage and and and	10.00	20.93	22.30	22.71	23.12	21.23	24.77	26.06	31.29	31.71	31.72	3171	H Q O	ATI S D D
	8	8.6	18.8	24	21.8	19.7	17.4	20	17	18	21	22	22	24.5	31	27	26.2 5	27.1	E 익 플	ΞΛΨΟ
Ō	257	258	259	260	261	262	263	264	265 -	266	- 267	268	269	270	271	272	278	274	N E A	
	9.58	8.81	0	0	107	0	- 2.2	0.93	9,5	9.55	9.68	2.23	2.77	1.56	0.29	4.71	5.52	4.61		>ш ×≘≘×
- 2.0 ft -	10.80	11.27	2 8.73	1000	ST- 1	19.23	19.55	19.62	20.22	22.44	23.32	24.11	24.53	25.07	30.00	31.17	31.19	31.19	S S	A R R A A A A A A A A A A A A A A A A A
	8	9.5	17.8	21.4	= 21	18.8	15.7	17.5	18	17.5	17.2	21	21.5	23	28.9	26	24.8	26.1	о́Ш	EGGE
	278	279	280	281	282	- 283	284	285	286	287	288	289	290	291	292	293	- 294	295		0 00
	2.8	8.81	0	0	0	0.43	10.77	11.22	11.15	8.1 -	9.65	3.11	3.03	2.07	1.1	5.17	6.39	5.09	2 V	19 20.2
150	9.67	10.55	and the	16.60	17.70	18.58	19,53	19.61	the sales		and the second	23.89	24.53	24.98	29.02	30.42	31.00	31.02	Ľ Ŋ	2
15n —	1.6	9.5	15.9	16.5	11.5	11.3	15.1	11.3	24.5	- 21.1	21	1020	21.0	22.3	21.0	20.0	4	24.0	C H	
	299	300	301	302	303	304	305	306	307	308	309	310	2.02	312	313	314	315	376	A A F	
	8.80	1.05	0.00	1.29	18.22	10.00	5.00	2.11	and and a second second	1	10	23.27	2.35	2.00	25.52	29.25	30.35	30.97	ы	
	7.4	11	16	18.7	18	19.4	33	29.6	22	22.7	22	24	217	20.6	- 21	27.5	26.4	23	o Y	
10 0 —	320	321	222	222	324	325	326	327	328	320	320	321	620	322	234	225	276	227	R 0	
	1.4	0	0	0	0.22	0	0	0	0	- 0	0	2.27	8.98	4.39	4.52	1.75	3.95	7.97	A	
	8.53	13	Palling				-		1			21.40	21.42	24.52	25.35	25.70	28.84	30.86	Ň	
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18,4	19.6	19.5	26.6	30.8	E	
	341	342	343	344	345	346	347	348	349	350	-351	352	353	354	355	356	357	358	01	<u></u>
0.5ft —	0.13	0	0	Ô	0	0	0	0	0	0	0	4.4	5.42	8.39	5.75	6.2	2.24	0.06	Q I	00 =
			120 11-					13			21.22	21.28	21.39	21.48	21.87	25,46	25.72		14,90	0 CFS
	8.8	21	16	15.6	25.3	22.1	24	30.1	23	26.9	18	17	16.5	16	16.5	10	23	35	•	
	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	N	IB10
	0	0	0	0	0	0	0	0	0	0	3.22	4.28	4.89	5.48	5.37	0,46	2.12	0		
0.0ft —		12 C - 2	1	1	1. 1.	De Si	1			25	1 1 1 1 1 1	4	1.11	28		K	- Au	No.	EXHI	ын 4.10
	5	1.000			1000	The second second	1 A A			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 m		at				The Part of the Party of the Pa		

Exhibit 4 A-3-MRB-11-001 37 of 64

>5.0 ft -	9,4	20.5	18.08 12.3	18.08	19.75 19.5	20.36	20.87	21.32	21.41	21.49	21.84 20.4	22.33	37.3	32.8	45.4	55.8	51.5	42.3	F	- Ino
	115	116	117	118	179	120	121	122	123	124	125	126	127	128	129	130	131	132	N V V V	CE GR
	9.15		18.19	19.22	20.20	20.44	0.87	21.30	21.48	21.58	22.92	23.52		30,51	31.98	-	34.11	35.24		VALLA
4.5 ft -	9	24.5	11.5	18.5	20	18:9	21.3	20.2	18	-19.4	22.6	21	42	29	31.3	37.4	33.1	35	CT NT	
	0.15	136	6.69	0.72	0,2	1.54	0	1.1	3.48	2.18	0.32	2.52	747 0	148	0.68	150	1.01	0.24		88 88
	9.60	24	18,38	19.78	20.26	20.44	20.64	21.22	21.50	21.78	23.04	23.74	25.21	28.21	32.08	32.89	34.06	34.98	ATN RO	S AF AVD
83.14	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172		ION ET N
4.0 ft —	0.4	0	3.38	2.58	4.06	3.44	2.64	2.22	2.5	1.98	1.04	2.34	2.81	3.35	3.38	1.49	1.16	1.48	L L	EVAT I FEE
	9.26	12.96	20	20.11	16	20.46	20.59	18.8	19	22.11	22.97	23.69	23.49	45.6	29	29.4	33.78	34.86	R R	ELE
	175	176	177	178	179	780	181	182	183 5	184	185	186	187	188	189	190	797 1	192	ATI DTI	
35ft -	1.56	1.46	0	4.11	4.27	3.66	3.59	2.35	2.54	2.11	1.97	2.09	0.99	0	3.47	3.34	2.38	3.46	<u>N N N N N N N N N N N N N N N N N N N </u>	
	7.5	13	24.2	18.7	19.3	16.8	17	19	-20	20.6	21	22	23.4	44.5	28	28.4	29.2	29.2	STE √S	
	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	ALAS	7
	10.91	11.50	13.28	1.14	0.51	5.00	3.30	-	1.00	22.81	23.11	23.93	25.23		32.41	32.62	33.11	33.98	≤ Z A	TION
3.0 ft —	8	10.8	12.2	22	22.9	15	15.5	20	21	20	21.3	22.7	23.9	41	29	27.6	28	29.2		EVA
Q	9.6	0.7	1.08	0	0	0	0	0	0	2.81	1.81	1.23	1.33	230	3.41	14.77	13.91	4.78	AR H	
EGE	5.0	11.44	47.6	24.2	E 22.4	With The	all per la	ANIT I	115 200	22.83	23.14	24.15	25.46	28.60	31.92	32.36	32.44	32.82		
H JA	237	238	239	240	22.4	20.1	243	24	-745	246	21.3	248	249	24.3	251	252	253	254		LE RF/ Pth
	9.6	2.64	0	0	0	0	0	<u> </u>	0	2.83	1.84	10.4	10.79	13.93	15.49	4.36	5.64	4,82	N O N	t SU TIO DE DE
	11.22	10.78	18.8	24	21.8	19.7	19.66	20.99	22.41	18	23.17	24.23	24.11	24.5	31.29	31./1	31.72	27.1	ËGE	
0	257	258	259	260	261	262	263	264	265 -	- 266	267	268	269	270	271	272	273	274	AEA	WA EL FLO
œ 2.0 ft —	9.6	8.82	0	0	0	19.27	2.26	0.99	9,53	9.58	9.68	2.23	2.77	1.57 25.07	0.29	4.71	5.52	4.61	S S	AAX BRIC BRIC
	8	9.5	- 17.8	21.4	= 21	18.8	15.7	17.5	18	17.5	17.2	- 21	21.5	23	28.9	26	24.8	26.1	оо Ш	2002
	278	279	280	281	282	- 283	284	285	286	287	288	289	290	294	292	293	294	295		66 66
and and a	9.68	10.56	1747	16.60	17.70	18.63	19,59	19.66	11.10	0,13	9.00	23.89	24.53	24.99	29.02	30.42	31.00	31.02	Lo A≺	20
1.5ft —	7.6	9.5	15.9	16.5	17.5	17.5	15.7	47.5	24.3	- 21.1	21	18.8	21.6	22.3	27.6	26.6	24	- 24.6	U U U U U	
	299	1.06	6.09	7,31	8.51	10.1	3.89	2.16	2.0	308	0	9.34	2.93	2.69	1.42	3.82	7	6.42		
	8.81	44	16	19.7	18.25	19.44	22	20.6	22	227	22	23:28	24.37	24.99	25.52	29.25	30.35	30.97		
1.0ft -	320	321	322	323	324	325	326	327	328	329	330	331	332-	333	334	335	336	- 337	00 00	
Card of	1.41	0	0	0	0.25	0.01	0	0	0	- 0	0	2.28	8.98	4.39	4.52	1.75	3.95	7.97	J DF	
	8.54	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	21.40	21.42	24.52	19.6	- 19.5	28.84	30.86	Σ	
	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	01	00 -
0.5 ft —	0.14	0	0	0	0	0	0	-0	0	0	21.23	4.4	5.42	8.39 21.48	5.75	6.2	2.24	.0.06	14 90	
	8.8	27	16	15.6	25.3	22.1	24	30.1	23	26.9	18	17	16.5	16	16.5	19	23	35	14,50	
	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	Μ	IB11
0.0 ft				140				0		11	5.25	4.20	4.05	1.40		X	3		EXHI	BIT 4.11

Exhibit 4 A-3-MRB-11-001 38 of 64

100			18 04	18.05	19 77	20 10	20.94	21 42	21 50	21.57	21.88	22 34		1.100		Bet	1000	1000		S S S S S S S S S S S S S S S S S S S
> 0.0 ft -	9.4	20.5	12.3	15.3	19.5	20	20	19.4	20	20	20.4	-24	37.3	32.8	45.4	55.8	51,5	42.3	⊢	
	115	116	117	118	179	120	- 121	122	-123	124	125	126	127	128	129	130	131	132	Z	La
	0	0	5.74	2.75	0.27	_0.4	0.94	2.02	1.5	- 1.57	1.48	1.34	0	0	0. 8	0	0	0	Z Z	AC
	9.14	1 also	18.14	19.19	20.20	20.48	21.31	21.42	21.58	21.67	22.92	23.52		30,51	31.98		34.11	35.24		NALL
45ft -	9	24.5	11.5	18.5	20	18.9	21.3	20.2	18	19.4	22.6	21	42	29	31.3	37.4	33.1	35	5	
	135	136	137	138	139 -	140	141	142	143	144	145	146	147	148	149	0 150	151	152		~
	0.14	0	6.64	0.69	0.2	1.58	0.01	1.22	3.58	2.27	0.32	2.52	0	1.51	0.68	22.00	1.01	0.24		D86 D86
	9.00	24	10.02	17.2	16.2	20.47	18	21.41	21.02	10.8	23.00	23.14	23.21	20.21 24 BG	28.7	31.4	32.0	34.30	RC 41	S A AVI
	455	156	42.7	450	10.2	Aco	10.00	160	160	10.0	HOE	466	467	100	40.1	470	474	472		
4.0 ft —.	04	150	131	2 53	4.02	347	2.8	241	2.62	2.06	105	234	281	3 35	3 28	149	1.16	148	R F	EE.
	9.24	12.94	0.02	20.05	20.21	20.46	20.80	21.42	21.68	22.17	22.99	23.69	25.49	0.00	32.47	32.74	33.78	34.86		Ш. И К
	7.7	11.5	20	16-	P 16	16.8	17	18.8	19	20	21	21.6	24.5	45.6	29	29.4	31.4	31.4		
	175	176	177	178	179	780	181	182	183 -	184	185	186	187	188	189	190	-191-1	1 192		
	1.54	1.44	0	4.05	4.21	3.66	3.8	2.62	2.68	2.17	1.99	2.09	0.99	0	3.47	3.34	2.38	3.46	₹ 0	
3.5 ft —.	9.42	13.02	No. 15 Store	19.76	20,13			21.49	22.04	22.59	23.00	23.59	24.36	ALL D	32.60	32.740	33.34	34.65		
	7.5	13	24.2	18.7	19.3	16.8	.17	19	-20	20.6	21	22	23.4	44.5	28	28.4	29.2	29.2		
	196	197	198	199_	200	201	202	203	204	205	206	207	208	209	210	211	212	213	A AS	
	1.92	0.02	0	1.06	0.83	0	0	2.40	2.04	1.99	2	1.59	0.96	0	4.6	4.34	4.14	74.88	I ≤ ≥ ₽	NO
	10.90	10.8	12.2	22	22.0	15	15.5	20	21	22.02	23.12	23.93	23.23	11	22.41	27.6	200.10	20.20		VTI0
3.0 ft —.	247	240	210	220	224	222	222	20	225	226	21.3	220	23.3	220	100	222	1.222	20.2		
Q I	9.6	0.66	1	0	1 221	0	0	0	225	2.82	1.82	1.23	133	250	231	14 77	13.9	4.78	R R H	
Ш ()	0.0	11.42		The L	12 3 1	and the second	it immerie in	a sugar		22.84	23.15	24.15	25.46	28.60	31.92	32.36	32.44	32.82	ISZE	Ш Щ
Ŭ L	5.8	8.8	17.6	21.2	22.4	20.7		24	22	20	21.3	22	- 22	24.5	31	28	26.801	28	Ĩ₹₹Š	Э С Ч С Ч С Ч
E 250 -	237	238	239	240	241	242	243	244	- 245	246	247	248	249	250	251	252	253	254		J A K A L
	9.6	2.62	0	0	0	0	0	N. 0.	0	2.84	1.85	10,4	10.79	13.93	15.49	4.36	5.64	4.82		DERIC
Ö	11.22	10.77	See Su		and the second	A State	19.67	21.00	22.42	22.84	23,17	24.23	24.77	26.07	31.29	31.71	31.72	31.71	₹ŏ₽	ABE ABE
Q	8	8.6	18.8	24	21.8	19.Z	17.4	20	17	18	21	22	22	24.5	31	27	26.2	1 21.1		LE AL
P	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	A B S	N U U U U U U U U U U U U U U U U U U U
ш 2.0 ft —	9.0	8.82	-		0	- 10 29	19.61	10.68	9,53	9.58	9.08	24.44	2.11	7.57	0.29	4.17	21 19	4.07	S L	AX AXII AX
	8	9.5	17.8	214	- 21	18.8	15.7	17.5	18	17.5	17.2	24	215	23.01	28.9	26	24.8	26.1	E S	≥00≥
	278	270	280	281	282	282	284	285	196-	287	788	280	200	201	202	203	204	205	ŭ Q	
	2.82	8.82	0	0	0	0.48	10.82	11.26	11.18	8.13	9.66	3.11	3.04	2.07	1.1	5.16	6.38	5.08		91 91 92 92
6.97	9.68	10.56	3.74	16.60	17.70	18.64	19.59	19.67				23.90	24.53	24.99	29.02	30.41	30.97	31.00	L A	2
15ft —	7.6	9.5	15.9	16.5	17.5	17.5	15.7	17.5	24.3	- 21.1	21	18.8	21.6	22.3	27.6	26.6	24.5	-24.6	с Ч	
	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	Y Y	
	2.08	1.06	6.09	7.32	8.51	10.1	3.89	2.17	- 0	1	0	9.54	2.93	2.69	1,42	3.81	6.92	6.4		
	8.81	44	40.0	40.7	18.25	19.41	22	20.0	22	1 227	22	23.28	24.37	24.99	20.52	29.24	30.35	30.96		
100	1.4	11 nin	10	10.7	10	19.4	33	29.0	22	22.1	22	ZI	1	20.0	14	21.3	20.4	23	l X Ś	
1.0 m —.	320	321	322	323	324	325	326	321	128	329	330	337	932	333	334	335	336	331	R 10	
	8.54	V	in the		0.2.5	0.07			1	- 0	0	21.40	21.42	24.52	25 35	25.70	28.84	30.86	6	
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18.4	19.6	19.5	26.6	30.8	2	
	341	342	343	344	345	346	347	348	349	350	-351	352	353	354	355	356	357	358		00
0.5ft -	0.14	0	0	0	0	O	0	0	0	0	0	4.4	5.42	8.39	5,75	6.2	2.24	0.06	Q1	00 =
10000000	-	2715	The State	1-010	19 25				1		21.23	21.28	21.39	21.48	21.87	25,46	25.72		14,90	0 CFS
	8.8	27	16	15.6	25.3	22.1	24	30.1	23	26.9	18	17	16.5	16	16.5	19	23	35	, -	
	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	37.7	378	379	N/	IB12
	0	0	0	0	0	0	0	0	0	0	3.23	4.28	4.89	5.48	5.37	6.46	2.72	0		
0.0 ft -		10 -	1	11.20	1. 2.	20 23	0		1	16 180	10.51	100 14	and the second	78		N.	in the		EXHI	BIT 4.12
		1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 2 1			1	N 745 4 2		-	4	at	and the second second		1000	ALL THE		

Exhibit 4 A-3-MRB-11-001 39 of 64

	0.5ft —	1.0ft —		1.5ft —		2.011 -		1000	H 2.5 ft	H LEG	Q 3.0 ft -		3.5 m -			4.0 ft —		4.5ft —		5.011	50ft
8.8 362	8.4 341 0.08	320 1.21 8.48	8.61 7.4	7.6 299	2/8 2.6 9.45	10.60 8	257 9.28	11.03	237 9.28	9.28	8 217	1.7 10.78	9.20	175 1.32	9.02 7.7	155 0.32	0.11 9.52 9.2	9 135	0 9.11	9.4 115	
27	26 342 0	321 0	11	9.5 300 0.89	279 8.56 10.39	11.14 9.5	258 8,56	10.54 8.6	8.8 238 2.28	0.27	10.8 218	0	13	176 1.23	12.73 11.5	156 0	24	24.5 136	0	20.5	12 4 1
16 364	24.1 343 0	322 0	16	15.9 301 5.79	280	- 17.8	259 0	18.8	17.6 239	0.39	12.2 219	0	24.2	177 0	20	157 2.89	6.01 17.89 15	11.5 137	5.11 17.51	12.3	17,41
15.6 365	19.2 344 0	323 0	18.7	16.5 302	287	21.4	260 0	24	240	0	22 220	0.4	19.10	178 3.27	19.27 16-	158 1.87	0.23 19.07 17.2	18.5 138	2.11 18.73	15.3 118	17.41
25.3 366	21.1 345 0	324 0	18	17.5 303 8.02	0	21	261 0	21.8	22.4	0	22.9 221	0.31	19,61	179 3.51	16	159	19.50 16.2	20- 139	0.1 20.06	19.5 179	19.60
22.1	18.2 346 0	325 0	19.4	17.5 304 9.47	0.06 17.84	18.86 18.8	262 0.01	19.71	-242	4.86	15 222	19.86	19.80	780 2.87	19.67 16.8	160 2.67	0.9 19.67 17	18.9	-0.2 19.80	20	20.20
24 368	23 347 0	326 0	33	15.7 305 3.26	284 10.18 18,96	-18,96 15,7	263 1.67	19.07 17.4	19 243 0.85	4.37 19.85	15.5 223	2.88	19.88	181 2.86	19.86 17	161 2.05	20.05 18	21.3	0.46	20	20.46
30.1 369	28.8 348 0	327 0	29.6	17.5 306 1.55	285 10.65 19.05	19.06 17.5	264 0,5	20.50	24	0.65	20 224	1.59	20.59	182 1.88	20.68 18.8	162	0.67 20.76 19	20.2	1.54 20.87	19.4 122	20.94
23 370	23 349 0	328	22	24.3	10.66	19.78 18	265 9.23	21.82	245	0.7	21 225	1.35	21.35	183 2.02	21.02 19	163 2.01	21.01 19	18 143	1.01	20	21.01
26.9 371	33 350 0	329 0	22.7	21.1	7.53	21.72	266 9.29	22.12	20	2.11 22.12	20 226	1.36	20.6	184 1.57	21.57 20	164 1.48	1.72 21.28 19.8	19.4 144	21.12	20 124	21.10
18 372	19.8 351 0	330 0	22	21 309	9.03	22.60 17.2	267 9,44	22.54	21.3 247 1.29	1.29 22.59	21.3 227	1.48	22.48	185 1.49	22.49 21	165	0.2 22.70 22	22.6 145	1.12 22.80	20.4	21.52
20.63 17 373	17 352 3.75	331 1.71 20.75	22.71	18.8 310 8.05	289 2.6 23.25	23,60	268 2.02	24.02	248	1.09 24.13	22.7 228	1.16 23.79	23.16	186 1.67	23.27 21.6	166 1.94	2.74 23.34 21.4	21 146	1.05 23.14	21	22.05
20.74 16.5 374	16 353 4.8	932 8.42 20.80	23.71	21.6	290 2.52 23.95	24.02	269 2.68	24.68	249	1.24	23.9 229	0.74	24.14	187 0.73	25.23 24.5	167 2.27	24.67 22.4	42 147	0	37.3	S TANK
20.85 16 375	18.4 354 7.95	333 3.88 24.00	24.48 20.6	22.3 312 2.15	291 1.57 24.45	24.57 23	270	25.99 24.5	250	28.25	41 230	0	44.5	188 0	45.6	168	27.63 24.86	29 148	0 30.03	32.8	No. of the second
21.33 16.5 376	19.6 355 5.26	334 4 24.86	25.00 21	27.6 313	292 0.78 28.72	29.68 28.9	271 0.17	31.17 31	251	2.87	29 231	3.96	28	189 2.81	31.81 29	169 2.72	0.22 31.42 28.7	31.3 149	0	45.4	and a state of the
19	19.5 356 5.68	335 1.42 25.18	28.92 27.5	26.6 314 3.42	293 4.68 30.02	30.68	272	31.15	28 252 3.76	14:17,	27.6 232	3.68	28.4	190 2.66	32.06 29.4	170	32.29 31.4	37.4	0	55.8 130	and the
25.30 23 378	26.6 357 1.92	336 3.55 28.52	29.95 26.4	24 345	294 5.89 30.52	30.69 24.8	273	31.17	253	13.19 31.81	28 233	3.46	29.2	-191 1.74	33.14 31.4	171	0.46 33.52 32.9	33.1 151	0 33.56	51.5	100
35 379	30.8 358 0	337 7.51	30.51 23	24.6	295 4.59 30.55	30.69 26.1	274	31.16	254	4.07	29.2 234	14.06	33.95	192	34.15 31,4	172	0.77 34.40 33.5	35 152	0	42.3	and a
, II,0 M	Q'	MORF	SO B	AY C 10	AYU(0-YE	COS AR F	SAN F		RY D D H, D	AZA AZA	RD A	ANA EXI:	STE LYSI STIN	C NAT G C	OND .	ITIO	ATM	ENT	PLA	NT	
	100 =				20	66, 6, 20	MAX V GRID GRID MAX F	VATEI ELEV, NUME 'LOOE	R SUR ATION SER DEP	RFACE	ELEV	ATION	7			ATION FEET N	VS ARE VAVD8		VALLAC		<u> </u>

45.h - 170 17	5.0 ft -	9.4	20.5	17.29	17.29	19.77	20.31	20.89	21.36	21.41	21.44	21.66	22.09	37.3	32.8	45.4	55.8	51.5	42.3	-	
43.8 - 0		115	116	117	118	179	120	121	122	123	124	725	126	127	128	129	130	131	132	Z	ľ
43 a - 9, 40 0, 10, 12 0, 10, 22 2, 22 2, 22 10 0, 20, 13 10 0, 20, 13 10 0, 20, 13 10 0, 20, 13 10 0, 20, 13 10 0, 20, 13 10 10, 20 <t< td=""><td></td><td>0</td><td>0</td><td>4.99</td><td>1.99</td><td>0.27</td><td>0.31</td><td>0.89</td><td>1.96</td><td>1.41</td><td>- 1.44</td><td>1.26</td><td>1.09</td><td>0</td><td>0</td><td></td><td>0</td><td>0</td><td>0</td><td></td><td></td></t<>		0	0	4.99	1.99	0.27	0.31	0.89	1.96	1.41	- 1.44	1.26	1.09	0	0		0	0	0		
458 - 9 44.3 100<		9.10	THE	17.34	18.72	20.10	20.25	21.32	21.39	21.50	21.54	22.80	23.13		30.02	31.52		33.56	35.10		
101 105 176 1	4.5ft -	9	24.5	11.5	18.5	20-	18.9	21.3	20.2	18	-19.4	22.6	21	42	29	31.3	37.4	33.1	35	5 Z	
$ \begin{array}{c} 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 $		135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	P 150	151	152		
9.22 24 100 1072 102 100		0.1	0	5.84	0.22	0.1	1.35	0.02	1.19	3.5	2.14	0.2	2.13	24.67	1.02	0.22	22.20	0.46	0.1		
$ \begin{array}{c} 40 \mathrm{a} & - \mathbf{u} & \begin{array}{c} 1.5 \\ 0.7 \\ 0.7 \\ 0.7 \\ 0.7 \\ 1.7 \\ 1.5 \\ 1.7 \\ 1.7 \\ 1.5 \\ 1.7 \\ 1.7 \\ 1.5 \\ 1.7 \\ 1.7 \\ 1.5 \\ 1.7 \\ 1.7 \\ 1.5 \\ 1.7 \\ 1.7 \\ 1.5 \\ 1.7 \\ 1.7 \\ 1.5 \\ 1.7 \\ 1.7 \\ 1.5 \\ 1.7 \\ 1.7 \\ 1.5 \\ 1.7 \\ $		9.47	24	15	17.2	16.2	17	18	19	10	19.8	22.15	23.33	24.07	21.05	28.7	31.4	32.9	- 33.5	TA M	
488 - 627 70 238 70 73 74		455	450	457	450	10.2	Same	1000	100	162	1010	Lice	466	467	100	400	470	174	172		
338 - 939 12.56 19.30 19.30 10.30 17 21.52 21.60 22.65 22.53 13.61 15.20 93.11 11.16 17.5 33.6 - 17.6 17.7 17.6 17.7 17.7 17.7	4.0 ft -	0.27	150	254	136	3.74	3.02	29 -	2.48	2.54	1.86	0.75	1.03	2 27	2.77	272	0.89	0.62	1 09	IR S	
33A - 773 11.5 20 16 12.6 14 19 14 19 14 19 14 19 14 19 14 19 14 19 14 19 14 19 14 19 144 19 144 19 144 19 14 19 14 19 14 19 14 19 14 19 14 <td></td> <td>8.89</td> <td>12.56</td> <td></td> <td>19.30</td> <td>19 90</td> <td>0 0.02</td> <td>2.0</td> <td>21.52</td> <td>21.60</td> <td>21.85</td> <td>22.56</td> <td>23.28</td> <td>25.23</td> <td></td> <td>31.81</td> <td>32.06</td> <td>33.14</td> <td>34.1</td> <td>L H</td> <td>i</td>		8.89	12.56		19.30	19 90	0 0.02	2.0	21.52	21.60	21.85	22.56	23.28	25.23		31.81	32.06	33.14	34.1	L H	i
33.8 - 77.5 77.6 77.6 77.7 77.8 79.9 79.0 79.7 79.8 79.0 79.7 79.8 79.0 79.7 79.8 79.0 79.7 79.8 79.0 79.7 79.8 79.0 79.7 79.8 79.0 79.7 79.8 79.0 79.7 79.8 79.0 79.7 79.8 79.0 79.7 79.8 79.0 79.7 79.8 <t< td=""><td></td><td>7.7</td><td>11.5</td><td>20</td><td>16-</td><td>16</td><td>16.8</td><td>17</td><td>18.8</td><td>19</td><td>20</td><td>21 /</td><td>21.6</td><td>24.5</td><td>45.6</td><td>29</td><td>29.4</td><td>31.4</td><td>31.4</td><td>「日子」</td><td>i</td></t<>		7.7	11.5	20	16-	16	16.8	17	18.8	19	20	21 /	21.6	24.5	45.6	29	29.4	31.4	31.4	「日子」	i
33.6 - - 2.70 - 0 2.72 2.8 2.6 7.55 7.68 7.57 0 2.47 2.60 7.72 2.00 7.5 7		175	176	177	178	179	180	181	182	183 -	184	185	186	187	188	189	190	191.00	11- 192	E Z	
133 m 13 m		1.19	1.06	0	3.3	3.39	0	0	2.72	2.6 8	1.85	1.56	1.68	0.73	0	2.81	2.66	1.74	2.75	≤ ∽ ⊲	
308 - 7.5 13 242 183 193 204 195 206 21 226 23.1 41.5 21.6 7.5 13 242 28.7 13 24.7 23.8 13 24.7 23.8 14.7 23.8 14.7 23.8 14.7 23.8 14.7 23.8 14.7 23.8 14.7 23.8 14.7 23.8 14.7 23.8 14.7 23.8 24.7 23.7 2	3.5ft -	9.13	1	1000	19.06		10		21.61	21.82	22.14	22.54	23.16	24.11		31.96	32.08	32.66	33.9	말説되	
300 - 996 997 998 998 207 240 200 240 200 <th< td=""><td></td><td>7.5</td><td>13</td><td>24.2</td><td>18.7</td><td>10.3</td><td>16.8</td><td>17</td><td>19</td><td>-20</td><td>20.6</td><td>21</td><td>22</td><td>23,4</td><td>44.5</td><td>28</td><td>28.4</td><td>29.2</td><td>29.2</td><td>ゴゴバー</td><td></td></th<>		7.5	13	24.2	18.7	10.3	16.8	17	19	-20	20.6	21	22	23,4	44.5	28	28.4	29.2	29.2	ゴゴバー	
30.R - - 0 - - 1.82 1.54 1.55 1.55 1.55 1.55 1.55 1.55 1.55 1.57		196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	I \$∕J d	Z
30R - 9 10.6 12.54 22 15 15.5 20 21 20 21.5 22.6 22.5 22.6 22.5 22.6 22.5 22.6 22.5 22.6 22.6 22.5 22.6 22.5 22.6 23.6 </td <td></td> <td>1.63</td> <td>0</td> <td>0</td> <td>0.36</td> <td>0</td> <td>0</td> <td>and o</td> <td>2.0</td> <td>1.82</td> <td>1.54</td> <td>1.54</td> <td>1.16</td> <td>0.71</td> <td>0</td> <td>3,96</td> <td>3.68</td> <td>3.46</td> <td>14.0</td> <td>ミシント</td> <td>F</td>		1.63	0	0	0.36	0	0	and o	2.0	1.82	1.54	1.54	1.16	0.71	0	3,96	3.68	3.46	14.0	ミシント	F
30A - 8 10.8 12.2 22 22 15 15.5 20 21 21 22 23 14 29 27.6 27.7 27.6 27.7 27.6 27.7 27.7 27.7 27.7 27.7 27		10.79	11.06	12.54		1 2 1		1	-us	22.07	22.21	22.61	23.77	25.06		31.81	31.98	32.49	33.2	ニマエ	
23 R 217 216 219 220 231 232 223 224 225 226 221 231 342 232 232 231 342 232 231 342 232 231 342 232 231 342 232 231 342 232 231 342 313 317 313 <	3.0 ft -	8	10.8	12.2	22	22.9	15	15.5	20	21	20	21.3	22.7	23.9	41	29	27.6	28	29.2]ບ_⊑	ے ا
2.3 A - - - - 1.07 2.23 1.37 1.07 1.16 0 2.24 1.37 1.07 2.16 0 1.07 2.16 0 1.16 0 2.24 1.37 1.07 2.16 0 1.16 0 2.24 1.37 1.16 0 0 1.16 0 2.24 2.45 3.15 1.16 2.24 2.26 2.16 2.16 1.16 2.24 2.26 2.16 2.16 2.16 3.15 1.16 2.24 2.45 3.15 1.16 2.26 2.26 2.26 2.26 2.26 2.26 2.26 2.45 3.15 1.16 2.26 2.26 2.45 3.17 3.16 5.07 4.16 2.16 3.16 5.07 4.16 2.16 3.16 5.07 4.16 2.16 3.16 5.07 4.16 3.16 5.07 4.16 3.16 5.07 4.16 3.16 5.07 4.16 3.16 5.07 4.16 3.16 5.07 4.16 3.16 5.07 4.16 3.16		217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	צ צ צ	
$ \begin{array}{c} 158 \\ -58 $		9.26	0.26	0.34	0	0	0	0	a calling	1.07	2.21	1.31	1.07	1,16	Con la	2,67	14.17	13.2	4.07	E Z S	5
$ \begin{array}{c} 136 \\ - \\ 106 \\ - $		5.0	11.08	47.6	24.2	E 224	CONTRACTOR	19.48	741	22.10	22.21	21.02	24.06	25.29	20.12	51.36	31./0	18.16	32.1	I S A S	Шü
23ft - 247 28t 240 241 242 241 <t< td=""><td></td><td>5.0</td><td>0.0</td><td>17.0</td><td>21.2</td><td>. 22.4</td><td>20.7</td><td>THE</td><td>24</td><td></td><td>20</td><td>21.3</td><td>LL .</td><td>44</td><td>24.3</td><td></td><td>20</td><td>Kara</td><td>20</td><td>[는 포 으</td><td>_ =</td></t<>		5.0	0.0	17.0	21.2	. 22.4	20.7	THE	24		20	21.3	LL .	44	24.3		20	Kara	20	[는 포 으	_ =
$20^{\text{A}} = \begin{bmatrix} \frac{226}{10} & \frac{226}{10} & \frac{2}{10} & $	2.5ft -	237	238	239	240	241	242	243	244	-245	246	122	248	249	1 250	257	252	253	254		
$1.5 h = - \begin{bmatrix} 18.8 & 18.8 & 24 & 21.8 & 19.7 & 17.4 & 20.0 & 17. & 180 & 271 & 22.2 & 24.5 & 31.1 & 277 & 45.2 & 27.5 & 2$		9.20	10.53		0		U States	19.02	20.60	21.87	22.20	1.52	23.98	24.61	25.97	31 17	31.15	31 17	31 10	E S S	L
$20 h = \begin{bmatrix} 257 & 258 & 259 & 260 & 261 & 262 & 263 & 264 & 265 & 266 & 267 & 268 & 269 & 270 & 271 & 272 & 273 & 274 & 274 & 275 & 274 & 274 & 275 & 274 & 275 & 274 & 274 & 275 & 274 & 275 & 274 & 275 & 274 & 275 & 274 & 275 & 275 & 274 & 275 & 275 & 274 & 275 & 2$		8	8.6	18.8	24	218	19.7	17.4	20	17	18	21	22	22	245	31	27-	26.2	- 27	비트의띠	
$ \begin{array}{c} 20\mathrm{fl} \\ - \\ 0.5\mathrm{fl} \\ - \\ 0.5f$		257	259	250	260	261	262	262	264	265-	- 266		268	269	270	274	272	272	27.	▋┛ĔШ	>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	and a second	9.26	8.56	0	0	1 20	0	- 1.62	0.6	9.24	9.3	9.61	1.98	2.61	1.37	0.17	4.15	4.97	4.06	പ്പ	
$15R = \begin{bmatrix} 8 & 9.5 & 17.8 & 21.4 & 21 & 18.8 & 15.7 & 17.5 & 18 & 17.5 & 17.2 & 21 & 21.5 & 23 & 28.9 & 26 & 24.8 & 26.7 \\ 2.6 & 8.56 & 0 & 0 & 28.7 & 28.2 & 28.9 & 26 & 24.8 & 26.7 & 29.2 & 29.9 & 2$	2.0ft -	10.60	11.14	3	SEC.	STE D	18.84	-18,93	19.03	19.78	21.77	22.62	23,57	23.98	24.53	29.68	30.68	30.69	30.6	j O	
$15R - \begin{bmatrix} 278 & 279 & 280 & 287 & 282 & 283 & 284 & 285 & 286 & 287 & 288 & 289 & 290 & 297 & 292 & 293 & 294 & 295 \\ 2.66 & 8.56 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & $		8	9.5	17.8	21.4	= 21	18.8	15.7	17.5	18	17.5	17.2	- 21	21.5	23	28.9	26	24.8	26.1	ÖÖ	9
$15 h = \left(\begin{array}{cccccccccccccccccccccccccccccccccccc$		278	279	280	281	282	- 283	284	285	286	287	288	289	290	291	292	293	294	295	し じ	9
$15 R - \left[\begin{array}{cccccccccccccccccccccccccccccccccccc$		2.6	8.56	0	5.0	0	0.04	10.18	10.65	10.66	7.54 -	9.03	2.57	2.48	1.53	0.78	4.68	5.89	4.59	lΥ κ	
$1.5 \ \ - \ \ \ - \ \ - \ \ - \ \ - \ \ - \ \ \ \ - \ \ - \ \ - \$	anala" in	9.45	10.39	1 47		121	17.84	18,94	19.03	- Labor		and the second second	23.25	23.95	24.45	28.72	30.02	30.52	30.5	A A	
$10\bar{\mathrm{n}} = \left[\begin{array}{cccccccccccccccccccccccccccccccccccc$	1.5ft -	7.6	9.5	15.9	16.5	17.5	17.5	15.7	17.5	24.3	21.1	21	18.8	21.6	22.3	27.6	26.6	24	24.6	LO E	
$10\hat{\mathrm{fl}} = \left[\begin{array}{cccccccccccccccccccccccccccccccccccc$		299	300	301	302	303	304	305	306	307	308	309	310	-311	312	313	314	315	316	≽ 3	
$10ft - \begin{bmatrix} 8.62 \\ 7.4 \\ 111 \\ 16 \\ 320 \\ 321 \\ 322 \\ 323 \\ 324 \\ 325 \\ 326 \\ 327 \\ 228 \\ 329 \\ 320 \\ 331 \\ 322 \\ 332 \\ 331 \\ 311 \\ 842 \\ 342 \\ 343 \\ 344 \\ 345 \\ 344 \\ 345 \\ 344 \\ 345 \\ 346 \\ 347 \\ 348 \\ 347 \\ 348 \\ 349 \\ 350 \\ 361 \\ 357 \\ 351 \\ 352 \\ 351 \\ 352 \\ 351 \\ 352 \\ 353 \\ 354 \\ 355 \\ 356 \\ 357 \\ 356 \\ 356 \\ 357 \\ 356 \\ 357 \\ 356 \\ 357 \\ 358 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $		1.85	0.89	5,79	6,91	8,02	9.47	3.24	1.53	0.0	9	0	8.95	2,35	2.15	1,12	3.42	6.52	5,94	Ma Ma	
$10 ft - \left(\begin{array}{cccccccccccccccccccccccccccccccccccc$		8.62		1000	40.7	10	10.1	and the second	2000	22	1 227	22	- 22.0	23.11	24.48	25,00	28.92	29.95	30.5		
$1.0 \text{ ft} = \begin{bmatrix} 320 & 321 & 322 & 323 & 324 & 325 & 326 & 327 & 228 & 329 & 330 & 331 & 832 & 333 & 334 & 335 & 336 & 337 \\ \hline 1.22 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$		7.4	11	10	18.7	18	19.4	33 -	29.0	11	22.1	11	21	214	20.6	A GAL	21.3	20.4	23	l X	
$0.5 \text{ft} - \begin{bmatrix} 1.22 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$	1.0 ft -	320	321	322	323	324	325 1	326	327	328	329	330	331	932	333	334	335	336	337	R R	
$0.5 ft - \left[\begin{array}{c ccccccccccccccccccccccccccccccccccc$		9.19	0	000		0	0	0	0	1 01	+ 0	0	20.71	20.90	3,88	21.96	25.19	3.33	1.51	1 E	
$0.5 ft - \left[\begin{array}{c ccccccccccccccccccccccccccccccccccc$		8.4	26	24.1	19.2	21.1	18.2	53	28.8	23	33	19.8	17	16	18.4	19.6	19.5	26.52	30.9	2	
0.5ft - 0.08 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		244	242	242	244	245	246	247	240	240	250	254	252	252	254	1. 12	2	257	250		
0.5 R 0 <td>0.50</td> <td>0.08</td> <td>0</td> <td>343</td> <td>344</td> <td>343</td> <td>340</td> <td>341</td> <td>348</td> <td>349</td> <td>350</td> <td>1</td> <td>374</td> <td>48</td> <td>7.96</td> <td>5.26</td> <td>568</td> <td>192</td> <td>358</td> <td> Q</td> <td>100</td>	0.50	0.08	0	343	344	343	340	341	348	349	350	1	374	48	7.96	5.26	568	192	358	Q	100
8.8 27 16 15.6 25.3 22.1 24 30.1 23 26.9 18 17 16.5 16 16.5 19 23 35 35 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 0 MB 0.04 0 <th< td=""><td>0.5 n -</td><td>0.00</td><td>2 4 4 4</td><td>38-15</td><td>1.17. 47.4</td><td>A Real</td><td>10000</td><td></td><td></td><td></td><td>-</td><td>20.57</td><td>20.63</td><td>20.74</td><td>20.85</td><td>21.33</td><td>25.06</td><td>25.30</td><td></td><td>11 0</td><td>500 0</td></th<>	0.5 n -	0.00	2 4 4 4	38-15	1.17. 47.4	A Real	10000				-	20.57	20.63	20.74	20.85	21.33	25.06	25.30		11 0	500 0
362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 0 MB		8.8	27	16	15.6	25.3	22.1	24	30.1	23	26.9	18	17	16.5	16	16.5	10	23	35	1 11,0	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	277	378	379	2	
		0	0	0	0	0	0	0	0	0	0	2.57	3.63	4.24	4.85	4.83	6.06	2.3	0		MB3
	00.0	10	1	1.00		1 1 3 1				100			-	0	1	and the second second	1	1 10			דוקון

5.0 ft -	9.4	20.5	17,48	17.49	19.65	20.20	20.49	20.97	21.05	21.13	21.53	22.05	37.3	32.8	15 A	55.8	515	6123	F	OUP
	115	116	117	118	179	120	121	122	123	124	725	126	127	128	129	130	131	132	AN	CE GR
	9.11	0	5.78 17.56	2.79	20.06	0.2	0.49	20.92	21.06	21.15	22.80	23.14	0	30.03	31.52	0	33.56	35.10	2	VALLA
4.5ft -	9	24.5	11,5	18.5	20	18.9	21.3	20.2	18	19.4	22.6	21	42	29	31.3	37.4	33.1	35	L	
	0.11	0	6.06	0.29	0.06	1.04	0	0.72	3.06	1.75	0.2	2.14	0	1.03	0.22	0	0.46	0.1	ΣĻ	RE D88
	9.51	24	17,80	19.27	19.71	19.86	20.19	20.84	21.06	19.8	22.70	23.33	24.67	21.63	31.42	32.29	33.52	34.40	VAI	NS A NAVI
40 ft -	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	ы Ш 2	ATIO EET
	9.00	12.68	2.8	19.59	19.7T	19.84	20.05	20.80	21.07	21.59	22.49	23.27	25.23	2.11	31.81	32.06	33.14	34.15	Б П П	LE V
	7.7	11.5	20	170	16	16.8	17	18.8	19	20	21	21.6	24.5	45.6	29	29.4	31.4	31,4		
	1.3	1.18	0	3.59	3.71	3.04	3.05	2	2.07 8	1.59	1.49	1.67	0.73	0	2.81	2.66	1.74	2.75	N S D C	5
3.5 ft -	9.20 7.5	13	24.2	19.38	19,71	19:87 16:8	20.10	20.80	21.39	21.97 20.6	22.48	23.17	24.15	44.5	31.96 28	28.4	32.66	33.95		
	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	AL'AS H S	
	10.79	11.16	12.78	0.68	0.41	3.01		20.86	21.72	22.12	22.59	23.78	25.15	0	31.81	31,98	3.46	33.27	N N L C	EVA.
9 ^{3.0 ft} −	8	10.8	12.2	22	22.5	15	15 5	20	21	20	21.3	22.7	23.9	41	29	27.6	28	29.2	C S S S S	
EGEI	9.3	0.36	0.58	0	0	0	0	0.86	0.72	2.12	1.29	1.08	1.25	230	2.81	14.11	13.19	4.07	A N N N	H FOR
H	5.8	11.11 8.8	17.6	21.2	22.4	20.7	19.90	24	22.03	22.13	22.59	24.10	25.36	28.41	31.36	31.76	26.8000	32.16	DIS	
∐2.5 ft -	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	Х Ч Д Д Д Д Д Д Д Д Д Д Д Д Д Д Д Д Д Д	
	9.3	10.55	0			19.72	19.09	20.58	21.82	2.13	22.55	24.01	24.67	26.00	31.17	31.16	31.17	31.16	TAF	
JOO1:	8	8.6	18.8	24	21.8	19.7	17.4	20	17	18	21	22	22	24.5	31	27-	26.2	27.1	NEC	
200 -	9.3	8.57	0	0	- 201	0:02	1.69	0.58	9.22	9.28	9.44	2.01	2.67	1.5	0.17	4.16	4.97	4.06	S O	2002
2.010	10.61	11.14 9.5	17.8	21.4	21	18.88	18.97	19.08	19.78 18	21.76	22.60	23.59	24.02	24.57	29.68	30.69 26	30.70	30.70	SO E S	66 6 66
	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	.293	294	295	UC EAF	20 21
	9.46	10.39		-	101 12	17.84	18,98	19.07	10.67	1.33 -	9.03	2.59	2.52	24.45	28.72	4.69 30.02	30.54	4.6	₹ ₹	
1.5ft -	7.6	9.5	15.9	16.5	17.5	17.5	15.7	17.5	24.3	21.1	21	18.8	21.6	22.3	27.6	26.6	24	24.6		
	1.86	0.89	5.79	6,91	8.02	9.48	3.28	1.57	-0	2	0	8.95	2,35	2.15	1.12	3.42	6.54	5.96) BA	
	8.62	11	16	18.7	18	19.4	33 -	29.6	22	22.7	22	22.70	23.71	24.48	25,00	28.92	29.95	30.51	Q	
1.0ft -	320	321	322	323	324	325 0	326	327	328	329	330	331	332	333	334	335	336	337	RA	
	8.48	0		200	0	1				0		20.74	20.80	24.00	- 24.86	25.18	28.52	1.51	Σ	
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18.4	19.6	19.5	26.6	30.8		
0.5ft -	0.08	0	0	0	0	0	0	0	0	0	0)	3.74	4.8	7.95	5.26	5.66	1.92	0	Q1	00 =
	8.8	27	16	15.6	25.3	22.1	24	30.1	23	26.9	18	20.63	16.5	20.85	16.5	19	25.30	35	11,60	065
	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	М	B5b
0.0 ft	0		1			The second	1			11	2,31	5.05	124	9.05	4.05	1 Pr	-2		EXHI	BIT 4.5b

Exhibit 4 A-3-MRB-11-001 42 of 64

5.0 ft -	9.4	20.5	16.90 12.3	16.90 15.3	19.73 19.5	20.24 20	20.63 20	21.13	21.20	21.27 20	21.64 20.4	22.14	37.3	32.8	45.4	55.8	51,5	42.3	E I	ROUP
	115 0	116 0	117 4.6	118 1.6	179	120	121	122	123	124	125	126	127	128	129	130 0	131	132	AA	ACE G
	9.10	Theor	16.94	18.67	20.09	19.96	101	21.13	21.23	21.32	22.83	23.26		30.03	31.52	Sec. 1	33.56	35.11		VALL
4.5ft -	9	24.5	11.5	18.5	20-	18.9	21.3	20.2	18	19.4	22.6	5 21	42	29	31.3	37.4	33.1	35		
76735	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152		288 288
	9.42	0	17.46	18.68	19 14	19 69	20.56	21.15	21.24	21.46	22.87	23.55	24.68	27.60	3143	32.29	33 53	31.11		A V C
	9.2	24	15	17.2	16.2	17	18	19	19	19.8	22	21.4	22.4	24.86	28.7	31.4	32.9	- 33.5	A M	ΪΖ Ω∟
dolar .	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172		EE ⁻
4.0 ft —	0.22	0	2.16	1.48	2.94	2.69	2.56	2.15	2.24	1.66	0.87	2.15	2.28	2.74	2.73	0.89	0.63	0.91	E X	У Ц Ц Z
	8.74	12.39	No. of All	19.03	19:09	11171		21.16	21.23	21.54	22.79	23.57	25.48	and a	31.81	32.07	33.14	34.17	<u>د</u> م	Ш —
	7.7	11.5	20	16-	10	16.8	17	18.8	19	20	21	21.6	24.5	45.6	29	29.4	31,4	31,4		
	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192		
358 -	9.08	0.89	0	3.03	3.09			2.30	21.23	1.54	1.19	7.97	0.98	0	2.87	32 000	32 67	31.02	N 2 2 2	
5.510	7.5	13	24.2	18.7	-19 3	16.8	17	19	-20	20.6	21	22	23.1	44.5	28	28.4	29.2	29.2		Z
	196	197	198	199	200	201	712	203	204	205	206		208	209	210	211	212	213	R L L S	ŬĔ
	1.58	0	0	0.28	0	0	0	22	1.24		0 8	0	0	0	3,97	3.69	3.47	14.08		A V
	10.94	10.99	12.40				and the	- all	and a		23.36	24.25	25.58	0.78.110	31.82	31.98	32.54	33.29		
_ 3.0 ft —	8	10.8	12.2	22	22.	15	15.5	20	21	20	21.3	22.7	23.9	41	29	27.6	28	29.2		
Z Ш	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	R R ≥ Ŏ	D A T
Э Ш	9.31	0.79	0.2	0	0	0	0	a contain	22.37	22.76	2.00	7.55	7.08	000.20	24.82	24.37	24.83	4.09	다 Z S 군	J R Z L
	5.8	8.8	17.6	21.2	224	20.7	19	24	22.51	20	21.3	24.24	20.44	24.5	31	28	26.801	28		л С С С С С С С С С С С С С С С С С С С
H ara	237	238	230	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254		H A B C
ш 20п — О	9.37	2.32	0	0	0 - 0	0	0.77	0 4	0.37	2.76	1.92	10.38	10.65	13.64	14.93	3.77	5.03	4.78		
	11.15	10.60	1000				19.28	20.78	22.27	22.72	22,85	24.09	24.75	26.08	31.17	31.16	31.18	31.17		N U U U U
ğ	8	8.6	18.8	24	21.8	19.7	17.4	20	17	18	21	22	22	24,5	31	27-	26.2	27.1		A II X
Ē	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	NA RA	2002
2.0 ft -	9.37	8,65	0	0	0	0	1.88	0.78	9,38	9.46	9.22	2.09	2.75	7.58	0.17	4.76	4.98	4.07		0 - 0
1.11	10.00	9.5	17.8	21.4	21	18.8	15.7	17.5	18.50	17.5	172		24.07	24.02	23.03	26	24.8	26.1		19 20.3
	278	279	280	281	282	282	284	285	286	287	288	280	290	201	202	293	294	205	lă "	~
	2.66	8.65	0	0	0	0.23	10.37	10.85	10.92	7.82	9.15	2.65	2.57	1.62	0.79	4.69	5.9	4.6	15 ž	
and a second	9.51	10.43	13 - 51	-91	17.60	18.06	19,18	19.26	1 Jaco	-	1	23.31	23.98	24.47	28.73	30.02	30.53	30.56	A A	
1.5ft —	7.6	9.5	15.9	16.5	17.5	17.5	15.7	17.5	24.3	- 21.1	21	18,8	21.6	22.3	27.6	26.6	24	- 24.6	C E	
	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	¥ -	
	1.91	0.93	5.87	7.02	8,76	9.66	3.48	1.76	The state of the s	1	0	9.01	2,38	2.1/	7.13	3.42	6.53	20.54	<u>e</u> B	
	7 4	11	16	18.7	18	19.4	1 33 -	29.6	22	27	22	22.14	217	29.50	- 71	20.55	26.4	23	0	
10 0 –	320	321	222	223	324	325	326	327	328	320	330	334	-	222	1 734	225	626	1 227	ц К	
1.010	1.26	0	0	0	0	0	0	0	0	- 0	0	1.74	8.48	3.9	4.01	1.43	3.56	7.51	lő	
	8.50	-	1.	3-0	1	and have been a	-					20.76	20.82	24.02	24.87	25.19	28.53		Ιž	
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18.4	19,6	19.5	26.6	30.8		
	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	0100	_
0.5ft —	0.1	0	0	0	0	0	0	0	0	0	0	3.76	4.82	8.08	5.27	5,69	1.93	0		
	8.8	27	16	15.6	25.3	22.1	24	30.1	23	26.9	20.39	17	16.5	20.87	16.5	25.06	23.30	35	11,600	CFS
	262	362	364	365	366	367	369	260	370	374	372	372	374	375	376	1247	378	370		
	0	0	0	0	0	0	0	0	0	0	2.59	3.65	4.26	4.87	4.84	6.06	2.3	0	I MB	/b
0.0.0		UD-			1	No. of Street	6	-	and a	A PAR		1	0.	1000	and the second second	N.	11		EXHIBI	T 4.7b 丨
0.0 R		205	-		1 30	No Wall	1 1 1		1 mars	11	- 14		100	1.3	a state of the	100	-	R. L.		

Exhibit 4 A-3-MRB-11-001 43 of 64

50ft		R W	17,51	17.51	19.66	20.22	20.54	21.01	21.08	21.16	21.54	22.05		A PLE	Contraction of the	and it	10-1-1	Gad.		
2010 10	9.4	20.5	12.3	15.3	19.5	20	20	19.4	20	20	20.4	21	37.3	32.8	45.4	55.8	51.5	42.3	Ę	L R
	115	116	117	118	179	120	- 121	122	123	124	125	126	127	128	129	130	131	132	A	1
	9.11	0	17.59	18.80	20.07	19.99	0.54	20.96	21.11	21.19	22.80	23.14	0	30.03	31.52		33,56	35.10	Z D	ALLA V
44.0	9	24.5	11.5	18.5	20	18.9	21.3	20.2	18	19.4	22.6	21	42	29	31.3	37.4	33.1	35	Ξ	
4.9 m —	135	136	137	138	139	140 -	141	142	143	144	145	146	147	148	149	150	151	152		
	0.11	0	6.09	0.3	0.07	1.09	0	0.76	3.11	1.79	0.2	2.14	0	1.03	0.22	0	0.46	0.1	E E	ARE D86
	9.51	24	17.81	17.2	19.73	19.93	20.24	20.89	21.11	19.8	22.11	23.34	24.07	21.03	28.7	31.4	33.32	34,40		la∨ NAV
Same	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	Щ М	<u>2</u>
4.0 ft —	0.31	0	2.81	2.08	3.53	0 2.93	2.24	1.89	2.11	1.55	0.71	1.94	2.27	2.77	2.72	0.89	0.62	0.9		FEE
	9.00	12.69	1000	19.60	19.72	19.93	20.22	20.89	21.14	21.63	22.50	23.28	25.23	These of the	31.81	32.06	33.14	34.15	Υ Υ	E E
	1.1	11.5	20	16-	16	16.8	17	18.8	19	20	21	21.6	24.5	45.6	29	29.4	31.4	31.4		ш
	1/5	1/6	1//	1/8	179	3.12	181	182	783 5	184	185	186	187	188	789	790	191	192	F F	
3.5 ft —	9.19	1.13		19.38	19.68	3.15	and a	20.99	21.53	22.01	22.49	23.15	24.11	V	31.96	32.08	32.66	33.95	N S O	
	7.5	13	24.2	18.7	19 3	16.8	.17	19	-20	20.6	21	22	23.4	44.5	28	28.4	29.2	29.2	E S O	z
	196	197	198	199	200	201	20.	203	204	205	206	207	208	209	210	211	212	213	AS D F	ē
	1.69	0	0	0.68	0.3	0	0	7.99	1.53	1.41	1.49	1.15	0.71	0	3.96	3.68	3.46	33.27	ŚŻ₩	ΛA
- 20 0	8	10.8	12.2	22	22.9	15	15.5	20	21.52	20	21.3	22.7	23.9	41	29	27.6	28	29.2	F A O	۳ ال ۵
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234		
E E	9.26	0.36	0.57	0	0	0	0	0	0.92	2.15	1.3	1.07	1.16	00.0	2.87	14.17	13.2	4.07	H N H	Э Ч С Ч С Ч С Ч С Ч С Ч
	ER	11.10	47.0	24.2		20 7	19.48	1000	22.04	22.15	22.61	24.05	25.28	28.08	31.36	31.76	31.81	32.16	AZ H	
É.	3.0	0.0	17.6	21.2	22.4	20.7	13	24	22	20	21.3	240	240	24.0	254	20	252	20		DERIC
∐ 2.5 ft —	9.26	2.3	0	240	- 241	0	0.48	244	0.04	2.15	1.31	10.24	10.55	13.25	14.93	3.76	5.01	4.16	ξŬŻ	
	11.02	10.54				-	19.00	20.49	21.84	22.15	22.56	23.98	24.61	25.86	31.17	31.16	31.17	31.16	A O O O	
ğ	8	8.6	18.8	24	21.8	19.7	17.4	20	17	18	21	22	22	24.5	31	-27	26.2	1 27.1	ΪΞ ̈́́́́́, Ḗ́	X99X
Ē	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	Ĕ,	A R R A R R A
2.0 ft —	9.20	11.14				18.83	18,91	19.00	9.23	21.76	22.61	23.57	23.98	24.53	29.68	30.68	30.69	30.69		
	8	9.5	17.8	21.4	21	18.8	15.7	17.5	18	17.5	17.2	21	21.5	23	28.9	26	24.8	26.1	ющ	66 61 66
	278	279	280	281	282	283	284	285	286	287	288	289.	290	291	292	293	294	295	ы С	20
	2.6	8.56	0	0	0	0.03	10.16	10.64	10,65	7.53 -	9.03	2:57	2.48	1.53	0.78	4.68	5.89	4.59	ž Q	
1.5ft —	9.45	9.5	15.9	16.5	17.5	17.5	15.7	17.5	24.3	21.1	21	18.8	23,95	24.43	20.12	26.6	24	24.6		
	299	300	301	302	303	304	305	306	307	308	309	310	-311	312	313	3147	315	316	ل ال ۲	
	1.85	0.89	5.78	6.9	8.01	9.46	3.22-	1.5	0	1	0	8,94	2.35	2,15	1.12	3.42	6.52	5.94	3A F	
	8.61		and a	40.7	-	10.4		20.0	22	227	22	22.71	23.71	24.48	25.00	28.92	29.95	30.51	AF O	
10.0	1.4	11	16	18.7	18	19.4	33	29.6	22	22.1	22	21	L.I.	20.8		21.5	20.4	23	ы Т Ш	
1.0 ft —	1.21	321	322	323	324	325	320	321	0	329	330	1.71	8.47	3.88	334	1.42	3.55	7.51	9. ¹	
	8.48			3-QUIC	-	and the second s	-				0	20.74	20.79	24.00	24.86	25.18	28.52		² M	
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18.4	9 19 6	19,5	26.6	30.8		
	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	Q1	00 =
0.5 ft —	0.08	0	0	0	0	U	0	0	0	0	20.57	3.74	4.79	20.85	5.26	25.08	7.92	- 0	11 60	0 CES
	8.8	27	16	15.6	25.3	22.1	24	30.1	23	26.9	18	17	16.5	16	16.5	19	23	35	11,00	
	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	R.#1	
	0	0	0	0	0	0	0	0	0	0	2.57	3.63	4.24	4.85	4.83	6.06	2.29	0		DAD DAD
0.0 ft	1		1-		-1 -1	No. The			1 mon	1 10	1		- In	1.50	1700	A.	1.5	1	EXHIE	BIT 4.9b
		-					and the second s			A DESCRIPTION OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER OWNE OWNER OWNER OWNER OWNE OWNE								A DECK DECK		

Exhibit 4 A-3-MRB-11-001 44 of 64

>5.0 ft -	-		17.53	17.54	19.65	20.20	20.46	20.93	21.00	21.09	21.52	22.05		1	to and to	and the	a Jai	En al.	-	The state
	9.4	20.5	12.3	15.3	19.5	20	20	19.4	20	20	20.4	21	37.3	32.8	45.4	55.8	51.5	42.3		74 월
	115	116	117	118	179	120	- 121	122	-123	124	125	126	127	128	129	130	131	132		1
	911	0	17.62	18.82	20.06	19 94	0.40	20.85	21.00	21.11	22.80	7.05	0	30.03	31.52	0	33.56	35 10		N11A
	9	24.5	11.5	18.5	20	18.9	21.3	20.2	18	19.4	22.6	21	42	29	31.3	37.4	33.1	35		
4.5 ft —	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152		
	0.11	0	6.12	0.32	0.06	1.04	0	0.65	3	1.71	0.2	2.14	0	1.03	0.22	0	0.46	0.1		日 88 88
	9.52	Tes.	17.85	19.32	19.77	19.91	20.09	20.70	20.99	21.27	22.70	23.33	24.67	27.63	31.42	32.29	33.52	34.40	E O	
	9.2	24	15	17.2	16.2	17	18 -	19	19	19.8	22	21.4	22.4	24.86	28.7	31.4	32.9	33.5		SNC N
40 0 _	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172		
4.010	0.32	0	2.85	2.12	3.5 100	10.02	2.09	1.7	7.99	7.41	0.7	1.93	2.27	2.14	2.12	0.89	0.62	0.9	⊢ ż	
	77	11.5	20	15.05	16	16.8	17	18.8	19	21.50	22.40	-21.6	23.23	45.6	29	29.4	31.4	31.4		
	175	176	177	178	170	780	181	182	183 0	184	185	186	187	188	180	190	101	102		
	1.31	1.21	0	3.65	3.78	3.12	3.03	1.83	-2 8	1.56	1.48	1.67	-0.73	0	2.81	2.66	1.74	2.75	I₹ o	
3.5ft —	9.20		Sale Sale	19.41	19,76	19.95	20.03	20.65	21.35	21.96	22.47	23.16	24.14		31.96	32.080	32.66	33.96		
	7.5	13	24.2	18.7	19.3	16.8	.17	19	-20	20.6	21	22	23,4	44.5	28	28.4	29.2	29.2		z
	196	197	198	199_	200	201	202	203	204	205	206	207	208	209	210	211	212	213	R L AS	ē
	1.7	0	0	0.71	0.46	3.15	3.03	1.65	1.35	1.36	1.47	1.16	0.74	0	3.96	3.68	3.46	414.07	S Z V	LA1
	10.78	11.18	12.88	22	22.6	15	15.5	20.94	21./1	22.11	21.38	23.11	23.13	11	31.81	31.98	32.49	35.41		∩ [́] Ш́ I
₽ ^{3.0 ft} -	247	10.0	240	220	224	222	10.0	20	21	200	21.3	22.1	23.0	220		41.0	5 J	23.6		
Ш	9.28	0.38	0.68	0	0	0	0	0.04	225	220	1.28	1.07	1.25	230	2.81	14 17	13.19	4.07	I \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	B S
Щ	0120	11.11			-	and the		- Contraction		22.12	22.59	24.07	25.33	28.30	31.36	31.76	31.81	32.16	IS Z E	Ŭ H H
н Н	5.8	8.8	17.6	21.2	22.4	20.7	19	24	22	20	21.3	22	- 22	24.5	31	28	26:800	28	I⊇ ₹ ≥	
L 25ft -	237	238	239	240	_ 241	242	243	244	245	246	247	248	249	250	251	252	253	254	רא בי א	A A A
Ö	9.28	2.31	0	0	0	0	0	0	0	2.12	1,29	10.26	10.58	13.53	14.92	3.76	5.01	4.16	ЧÖŽ	
	11.03	10.54	10.0	24	2000	10.7	18.99	20.62	21.80	22.12	22,55	24.00	24.66	26.01	31.17	31.15	31.1/	31.16	IZ 0 ₽	
P P	0	0.0	10.0	24	21.0	19.1	11.4	20	Barrow -	10	4	11	44	24.3	31	21	20.2	121.1		\$ 문 문 \$
ш	251	258	259	260	207	262	- 203	204	200	0.26	0.34	208	269	270	0.17	415	107	214	X X	2005
2.0 ft —	10.59	11.14		14 - P	KT-	18.83	18.91	19.00	19.77	21.75	22.60	23.59	24.01	24.57	29.68	30.68	30.69	30.69		
	8	9.5	17.8	21.4	= 21	18.8	15.7	17.5	18	17.5	17.2	- 21	21.5	23	28.9	26	24.8	26.1	юш	66 61 66
	278	279	280	281	282	- 283	284	285	286	287	288	289	290	294	292	293	294	295	Ŭ Q	20 21
	2.59	8.56	0	0	0	0.03	10.16	10.64	10.66	7.52	9.03	2.59	2.51	1.57	0.78	4.68	5.89	4.59		4
1.00	9.45	10.39	1000		142 M	17.83	18.92	19.00	and the second		- SY	23.25	23.95	24.45	28.72	30.02	30.52	30.54		
15π —	7.6	9.5	15.9	16.5	17.5	1/.5	15.7	-1/3	24.3	21.1	21	18.8	21.6	22.3	21.6	26.6	4.1	24.6	O L	
	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	345	316	A A	
	8.61	0.09	3.10	0.9	0.01	3.40	3.22	100	STREET.	1	10	- 22 71	23.71	24.48	25.00	28.92	29.95	30.51	ы Ш	
	7.4	11	16	18.7	18	19.4	33	29.6	22	27.7	22	71	21.7	20.6	- 21.	27.5	26.4	23		
1.0ft -	320	321	322	323	324	325	326	327	328	329	330	331	532	333	334	335	336	337	l∺ 8	
2.00,000	1.21	0	0	0	0	0	0	0	0	- 0	0	1.71	8.41	3.88	20430	1.42	3.55	7.51	16 ÷	
	8.48		1.50	3000	1 150	W. Land			The set		100	20.74	20.80	24.00	24.86	25.18	28.52	1.18.2	Ĭž	
	8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	17	16	18,4	19:6	19.5	26.6	30.8		
6.200	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	Q1	00 = 1
0.5ft —	0.08	0	0	Ø	0	0	0	0	0	0	0	3.74	4.8	7.95	5.26	5,68	1.92	_ 0	11 60	
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	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	277	378	379		
	0	0	0	0	0	0	0	0	0	0	2.57	3.63	4.24	4.86	4.83	6.06	2.3	0	I ME	310b
000		20	1.1		1 3 3 9	12 - 2 - 3	6	1	1	25A	1997	14	11-	La all	12.7	1	100	000		IT 4.10b
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Exhibit 4 A-3-MRB-11-001 45 of 64

101 113 1	L. C. LAUSTIN			47.10	47.50	40.00	20.20	20 10	20.01	24.04	24.40	24 52	22.05	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					S.F		6
438 11 12 <th12< th=""> 12 12 <th< td=""><td>>5.0 ft -</td><td>0.1</td><td>20.5</td><td>17.49</td><td>17.50</td><td>19.63</td><td>20.20</td><td>20.46</td><td>20.94</td><td>21.01</td><td>21.1</td><td>21.52</td><td>22.05</td><td>27.2</td><td>22.0</td><td>10 10 1 6</td><td>EE O</td><td>Sea E</td><td>Cit 2</td><td></td><td></td></th<></th12<>	>5.0 ft -	0.1	20.5	17.49	17.50	19.63	20.20	20.46	20.94	21.01	21.1	21.52	22.05	27.2	22.0	10 10 1 6	EE O	Sea E	Cit 2		
448 10 <t< td=""><td></td><td>9.4</td><td>20.5</td><td>12.3</td><td>10.3</td><td>61.9</td><td>1 20</td><td>20</td><td>19.4</td><td>20</td><td>120</td><td>20.4</td><td>Contract of</td><td>31.5</td><td>32.0</td><td>45.4</td><td>33.8</td><td>01.5</td><td>42.5</td><td>IE</td><td></td></t<>		9.4	20.5	12.3	10.3	61.9	1 20	20	19.4	20	120	20.4	Contract of	31.5	32.0	45.4	33.8	01.5	42.5	IE	
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4.36 -0 0.45 105		0 11	0	3,79	10 90	20.06	10.01	0.40	1,54	7.07	21.12	7.12	7.05	U	20.02	21.52		22.56	25 10		TTA
43.8 -		9.11	24.5	11.5	18.5	20.00	1913	21.2	20.00	18	10.4	22.00	20.14	42	20	31.32	37.4	32.1	35.10		MA
408 100 1	4.5 ft —	105	24.5	107	10.5	20	10.5	2100	20.2	10	10.4	22.0	21	44	23	31.3	31.4	30.1	100	l E ບ	
400 - 1 <td></td> <td>735</td> <td>130</td> <td>731</td> <td>138</td> <td>739</td> <td>740</td> <td>141</td> <td>142</td> <td>143</td> <td>144</td> <td>145</td> <td>140</td> <td>141</td> <td>148</td> <td>749</td> <td>150</td> <td>151</td> <td>752</td> <td>шш</td> <td>щ∞</td>		735	130	731	138	739	740	141	142	143	144	145	140	141	148	749	150	151	752	шш	щ∞
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40.0 1.57 1.59 1.57 1.59 1.50		9.2	24	15	17.2	16.2	17	18	19	19	19.8	22	21.4	22.4	24.86	28.7	31.4	32.9	- 33.5	LA X	NAN NAN
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33.0 - 7.7 11.5 7.0 16 7.6 16 7.7 11.8 7.7 11.5 7.0 16 7.7 11.5 7.0 16 7.7 11.5 7.0 7.5 17 16.5 7.0 16.5 7.0 16.5 7.6 7.5 18 2.0 7.5 18 2.0 7.5 18 2.0 7.5 18 2.0 7.5 18 2.0 7.5 18 2.0 7.5 18 2.0 <th2.0< th=""> <th2.0< th=""> <th2.0< th=""></th2.0<></th2.0<></th2.0<>		9.00	12.69		19.61	19.73	19.88	19.98	20.61	21.02	21.60	22.50	23.28	25.24		31.81	32.07	33.14	34.16		ЧZ
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33.h - 7.9 0 5.95 1.77 1.99 2.09 1.01 2.09 1.01 2.00 1.01 2.00 1.01 1.		175	176	177	178	179	180	181	182	183 -	184	185	186	187	188	189	190	191	11 192		
3.5.4 9.0 10.3 19.77 19.00 19.77 19.70 19.77 19.77 19.77 19.77 19.77 19		1.3	1.19	0	3.61	3.73	.3.08	2.98	1.81	2.02	1.6	1.5	1.68	0.74	0	2.87	2.67	1.74	2.76	S _ O	
Organization Image: state	3.5ft —	9.20	1	1180	19.39	19,72	19.90	19.98	20.61	21.42	22.04	22.50	23.18	24.16	THE R	31.96	32.09000	32.67	34.00		
OUNDARY USA P97 P98 P97 P97 P98 P97 P97 P98 P97 <		7.5	13	24.2	18.7	19.3	16.8	_17	19	-20	20.6	21	22	23,4	44.5	28	28.4	29.2	29.2		z
003001 - <td></td> <td>196</td> <td>197</td> <td>198</td> <td>199</td> <td>200</td> <td>201</td> <td>202</td> <td>203</td> <td>204</td> <td>205</td> <td>206</td> <td>207</td> <td>208</td> <td>209</td> <td>210</td> <td>211</td> <td>212</td> <td>213</td> <td>SL'SI</td> <td>Ō</td>		196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	SL'SI	Ō
00300 - 88 11.17 12.79 22.2 22.4 15 15.5 20 21 22.7 22.8 22.7 23.0 13.82 21.99 23.0 22.7 23.0 21.7 23.0		1.7	0	0	0.69	0.42	3.1	2.98	164	7.42	1.44	1.5	1.18	0.76	0	3,96	3.69	3.47	14.08	נל≰≩ו	AT
Sing 8 10.8 10.2 22 <th23< th=""> 21 21</th23<>		10.85	11.17	12.79				a la company	-15-	Seale 1	22.21	22.61	23.79	25.20		31.82	31,98	32.53	33.28		> Ш
2011 277 276 276 226 227 228 226 228 229 230 23 238 232 223 224 233 234 235 236 2	_ 3.0 ft —	8	10.8	12.2	22	22.9	15	15.5	20	21	20	21.3	22.7	23.9	41	29	27.6	28	29.2		9 d
Bit 1 0.37 0.37 0.39 0 0 0.27 0.27 1.31 1.19 1.3 0.0 2.38 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.19 1.31 1.10 1.	Z	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234		ш н
11.11 11.11 17.6 12.12 12.4 12.7 12.8 22.8 23.8	0	9.31	0.37	0.59	0	0	0	0	0.000	Were 0	2.21	1.31	1.09	1.3	Co.l	2.82	14.18	13.2	4.08	IESE	9 ⊎⊻⊥⊥
131 -			11.11	47.0	242	Enni	ming anoth	ALL DISTORT	and 1	41 22	22.22	22.62	24.10	25.36	28,44	31.36	- Infly	31.82	32.17	IS A F	
Light 23.8 237 238 239 240 243 244 226 244 246 244 246	Ξ.	5.8	8.8	17.6	21.2	· 22.4	20.7	19	24	12	20	21.3	11	22	24.9	31	28	France	728	lo Ŧ Ś	DE R DC
$ \begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $	⊡ 2.5 ft —	237	238	239	240	241	-242	243	244	245	246	247	248	249	250	251	252	253	254	∑⊃⊗	H A B
$ \begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $		9.37	2.37	0	0	<u> </u>	0	10.02	20.66	21.97	22.24	7.32	70.28	70.59	73.6	74.94	3.11	21 17	4.71	HE Q Z	E E E E
00 20 R 25 250 25 250 26	Ö	. 11.07	8.6	19.9	24	219	10 7	17.4	20.00	21.01	19	21	24.92	24.05	20,00	31.11	27	26.2 5	27 4	I E 이 원	<u>≷</u> ⊡z L
20R 239 259 259 256 299 200 207 440 207 417 417 419 249 400 201 20R 4 457 0 0 40 400	P P	0	0.0	10.0	24	21.0	3.0	E una	20	2	1	1 200	LL	220	270	31	270	2000	LL		X C C X
20A - 20A + 20A + <td< td=""><td>ш</td><td>0.21</td><td>238</td><td>259</td><td>200</td><td>201</td><td>202</td><td>- 203</td><td>204</td><td>0.22</td><td>0.20</td><td>0.61</td><td>2.02</td><td>269</td><td>1.56</td><td>0.17</td><td>LIL 4 16</td><td>407</td><td>1.06</td><td>N N</td><td>2002</td></td<>	ш	0.21	238	259	200	201	202	- 203	204	0.22	0.20	0.61	2.02	269	1.56	0.17	LIL 4 16	407	1.06	N N	2002
15R - 10R	2.0 ft —	10.61	11 17		N. S.	100	18:84	18.94	19.03	19.82	21 77	22.67	23.61	24.03	21.60	29.69	30.69	30.69	30.69		
$15R = \begin{bmatrix} 278 & 279 & 280 & 287 & 282 & 283 & 284 & 285 & 286 & 287 & 288 & 289 & 290 & 201 & 202 & 293 & 294 & 295 \\ 261 & 8.57 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & $		8	9.5	17.8	21.4	= 21 %	18.8	15.7	17.5	18	17.5	17.2	21	21.5	23	28.9	26	24.8	26.1		66 6 86
$1.5 \pm - 10 \pm - 10 \pm - 10 \pm 10 \pm 10 \pm 10 \pm 1$		278	270	280	281	282	282	284	285	286	207	288	280	200	201	202	202	201	205	ŭΩ	1.
$15ft = \begin{bmatrix} 9.46 & 10.39 & 10.5 & 17.5$		2.61	8.57	0	0	0	0.04	10.19	10.67	10.73	77 -	- 9.07	2.61	2.54	1.6	0.79	4.69	5.89	4.59		
$13 h = \begin{bmatrix} 7.6 & 9.5 & 15.9 & 16.5 & 17.5 & 17.5 & 15.7 & 17.5 & 24.3 & 21.1 & 21 & 18.8 & 21.6 & 22.3 & 17.6 & 26.6 & 24 & 24.6 & 24.7 & 24.8 \\ 299 & 300 & 301 & 302 & 303 & 948 & 3.25 & 1.53 & 40 & 0 & 0 & 88 & 309 & 310 & 411 & 312 & 314 & 345 & 346 & 0 & 0 \\ 1.6 & 0.89 & 5.8 & 6.92 & 8.03 & 9.48 & 3.25 & 1.53 & 40 & 0 & 0 & 82.32 & 27.1 & 23.71 & 24.49 & 25.00 & 28.92 & 29.95 & 30.51 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & $	1	9.46	10.39	24		Val. V	17.84	18,95	19.03	1000		1.0	23.26	23.96	24.46	28.72	30.02	30.52	30.54		
$1.0f I = \begin{bmatrix} 299 & 300 & 307 & 302 & 303 & 904 & 205 & 306 & 307 & 308 & 309 & 370 & 277 & 372 & 314 & 345 & 346 \\ \hline 1.86 & 0.89 & 5.8 & 6.93 & 8.03 & 9.48 & 3.25 & 1.54 & 0 & 0 & 0 & 0 & 2.35 & 1.26 & 2.16 & 2.16 & 2.16 & 2.16 & 2.16 & 2.9.5 & 3.051 \\ \hline 1.86 & 0.89 & 5.8 & 6.93 & 3.03 & 9.48 & 3.25 & 1.54 & 0 & 0 & 0 & 0 & 2.35 & 1.26 & 2.10 & 28.92 & 3.05 & 3.051 \\ \hline 3.20 & 321 & 322 & 322 & 322 & 324 & 325 & 326 & 327 & 228 & 329 & 330 & 331 & 8.52 & 3.33 & 334 & 335 & 336 & 337 \\ \hline 1.22 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$	1.5ft —	7.6	9.5	15.9	16.5	17.5	17.5	15.7	17.5	24.3	- 21.1	21	18.8	21.6	22.3	27.6	26.6	24	24.6	U E	
$1.0 fr = \begin{bmatrix} 1.86 & 0.89 & 5.8 & 6.92 & 8.03 & 9.48 & 3.25 & 1.53 & 0 & 0 & 0 & 8.99 & 2.36 & 2.16 & 5.72 & 3.42 & 6.52 & 5.94 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & $		299	300	301	302	303	304	305	306	307	308	309	310	-311	312	313	314	315	316	ר <u>א</u> צ	
$10R - \begin{bmatrix} 8.62 \\ 7.4 \\ 320 \\ 322 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$		1.86	0.89	5.8	6,92	8.03	9.48	3.25	1.53	- Anton	2	0	8,98	2,36	2,16	1.12	3.42	6.52	5.94		
$10 R - \left[\begin{array}{c ccccccccccccccccccccccccccccccccccc$		8.62			1.1		M	No.	1.11				22.71	23.71	24.49	25:00	28.92	29.95	30.51		
$1.0 \ ft - \begin{bmatrix} 320 & 321 & 322 & 323 & 324 & 325 & 326 & 327 & 328 & 329 & 330 & 331 & 332 & 333 & 334 & 335 & 366 & 337 \\ \hline 1.22 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$	1.	7.4	11	16	18.7	18	19.4	33	29.6	22	22.7	22	21	2017	20.6	21	27.5	26.4	23		
$0.5 ft - \begin{bmatrix} 1.22 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$	1.0ft —	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	- 337	E S	
$0.5 ft - \begin{bmatrix} 8.48 \\ 8.4 \\ 26 \\ 24.1 \\ 341 \\ 342 \\ 343 \\ 344 \\ 343 \\ 344 \\ 343 \\ 344 \\ 345 \\ 346 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $		1.22	0	0	0	0	0	0	0	0	- 0	0	1.71	8.46	3,89	204	1.42	3.55	7.51	0	
$0.5 ft - \begin{bmatrix} 8.4 & 26 & 24.1 & 19.2 & 24.1 & 18.2 & 23 & 28.3 & 23 & 33 & 19.8 & 11 & 16 & 18.4 & 19.6 & 19.5 & 19.3 & 26.6 & 30.8 \\ 341 & 342 & 343 & 344 & 345 & 346 & 347 & 348 & 349 & 350 & 351 & 352 & 353 & 354 & 355 & 356 & 357 & 358 \\ 0.08 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$		8.48	20	1	40.7	1.96	10.2	6	200.0	22	22	- 10.0	20.75	20.80	24.00	24.86	25.18	28.52	20.0	Σ	
$0.5 ft - \begin{bmatrix} 341 & 342 & 343 & 344 & 345 & 346 & 347 & 348 & 349 & 350 & 351 & 352 & 353 & 354 & 355 & 356 & 357 & 358 \\ 0.08 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$		8.4	26	24.1	19.2	21.1	18.2	23	28.8	23	33	19.8	11 PL	10	18.4	619.0	1920	26.6	30.8		
0.5ft - 8.8 27 16 15.6 25.3 22.1 24 30.1 23 26.9 18 17 16.5 16 16 16.5 19 23 35 362 363 364 365 366 367 368 367 368 369 370 371 372 373 374 375 376 377 378 379 0.0ft	Sec.	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	l Q1	00 =
8.8 27 16 15.6 25.3 22.1 24 30.1 23 26.9 18 17 16.5 16 16.5 19 23 35 35 35 35 35 36 36 367 368 369 370 371 372 373 374 375 376 377 378 379 0 MB11b 0.0 ft 0	0.5ft —	0.08	0	0	e.	0	0	0	0	0	0	0)	3.75	4.8	20.90	24.22	5,68	7.92	-0	11 60	
0.0 ft 10 10 10 10 10 10 10 10 10 10 10 10 10		8.9	27	16	15.6	25.3	22.4	24	30.4	22	26.9	20.30	17	16.5	20.00	46.5	20.00	23.30	25		
0.0 ft		200	262	Ded.	265	20.0	267	200	260	270	20.3	272	272	274	275	276	100	270	270		
		362	303	304	365	300	307	308	309	310	311	2.58	313	4 24	196	1.92	6.06	318	319	MF	311b
	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		-		-	U	U	v	0		0	2.30	5.05	4.24	4.00	4.05	0.00	2.0			
	0.0 ft		1 3 3	2		. 2 5	Sec. 20	001	1	h	14 16 10		12	100	18	100	a the	-			11 4.11D

Exhibit 4 A-3-MRB-11-001 46 of 64

50ft		The last	17,47	17.48	19.65	20.22	20.54	21.00	21.07	21.15	21.54	22.05	1 310 1	100	194 3	and in	100	Con a		LP.
10.010	9.4	20.5	12.3	15.3	19.5	20	20	19.4	20	20	20.4	. 21. 1	37.3	32.8	45.4	55.8	51.5	42.3	<u>L</u>	
	115	116	117	118	179	120	- 121	122	123	124	125	126	127	128	129	130	131	132		1
	0	0	5,17	2.18	0.15	0.22	0.54	1.6	1.07	1.15	1.14	1.05	0	20.02	21.52	0	22.56	25 10	1 <u>7</u> 8	ITA
	9	24.5	11.5	18.5	20.07	18.9	213	20.33	18	19.4	22.00	23.14	42	29	313	37.4	32.1	35.10		MA
45ft -	125	126	127	120	120	100	141	142	142	144	145	116	147	110	140	150	151	152		
	0.11	0	6.05	0.29	0.07	1.06	0	0.75	3.1	1.79	0.2	2.14	0	1.03	0.22	150	0.46	0.1	1 <u>2</u> 2	ш 88
	9.50		17.78	19.25	19.70	19.90	20.20	20.86	21.10	21.35	22.71	23.34	24.67	27.63	31.42	32.29	33.52	34.40	≧ 5	AR VD
	9.2	24	15	17.2	16.2	17	18 -	19	19	19.8	22	21.4	22.4	24.86	28.7	31,4	32.9	33.5	A R	NAN
100	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172		₽Ľ
4.0 ft —	0.3	0	2.78	2.05	3.5	2.9	2.2	1.86	2.1	1.55	0.71	1.94	2.27	2.77	2.72	0.89	0.62	0.9	I⊨ E	FE
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Exhibit 4 A-3-MRB-11-001 47 of 64

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Exhibit 4 A-3-MRB-11-001 48 of 64



This flap gate in Morro Creek is the outlet to the storm drain system serving the south side of the WWTP



The storm drain outlet to the ocean is often blocked by sand, restricting the flow.

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT FLOOD HAZARD ANALYSIS PHOTOGRAPHS

EXHIBIT 5.1

Exhibit 4 A-3-MRB-11-001 49 of 64



The surface outlet through the dunes at the end of Atascadero Street is now closed due to sand accumulation and encroachment by non-native vegetation (ice plant) from the south.



The surface path for flood flows is to the north and parallel to the dunes until it reaches a small creek to the north.

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT FLOOD HAZARD ANALYSIS PHOTOGRAPHS

EXHIBIT 5.2

Exhibit 4 A-3-MRB-11-001 50 of 64



The surface outlet through the dunes at the end of Atascadero Street was much larger in the past, as shown in this photo from 1972



The outlet through the dunes is beginning to narrow, as shown in this photo from 1979

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT FLOOD HAZARD ANALYSIS PHOTOGRAPHS

EXHIBIT 5.3

Exhibit 4 A-3-MRB-11-001 51 of 64



The area outlined above encompasses an area of approximately 7.3 acres. The southern portion is currently existing high ground used for RV storage, while the northern portion, currently occupied by sludge beds and aggregate operations, would require imported fill to raise the area above the 100-year flood level. This scenario is modeled as MB11 and MB11b in the accompanying analysis.

MORRO BAY CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT FLOOD HAZARD ANALYSIS RECOMMENDED PLANT SITE FOOTPRINT

EXHIBIT 6

Exhibit 4 A-3-MRB-11-001 52 of 64



City of Morro Bay

Public Services Department 955 Shasta Ave Morro Bay, CA 93442 (805) 772-6261 www.morro-bay.ca.us

TECHNICAL MEMORANDUM

Subject: Morro Creek Flood Analysis with Wave Run-up and Sea Level Rise (Addendum to Flood Study dated 8/7/09)

Date: Jan. 10, 2012

By: Barry Rands, PE, Associate Engineer

The flood analysis of Morro Creek prepared for the WWTP EIR and later submitted to and approved by FEMA was based on wave run-up values published in the effective (current) version of the Flood Insurance Study for San Luis Obispo County. It made no assumption regarding sea level rise due to global warming. Furthermore, that analysis did not assume simultaneous occurrence of both the 100-year flood and maximum wave run-up. The anticipation of both sea level rise and wave run-up is not a FEMA requirement when conducting a riverine flood analysis.

Based on request by California Coastal Commission staff, a more conservative analysis has been recently performed per the subject of this technical memo. The assumptions for this analysis were taken from "Alternative Sites Evaluation, Phase 2- Fine Screening Analysis, Appendix B: Shoreline Erosion Study and 100-year Sea Wave Run-up Analysis" conducted by Richard Gorman in October 2011. These assumptions include:

- Wave run-up (11.1 feet).
- Sea level rise (4.6 feet).
- Simultaneous occurrence of sea level rise, maximum wave run-up, and the 100-year flood.

The analysis was performed using FLO-2D, the same FEMA-approved modeling program used in the original analysis. The results illustrated in the attached maps show that the maximum water surface elevations in the vicinity of the existing WWTP are not impacted by this more conservative assumption. The only areas impacted are the beach to the west of the dunes, the creek channel from the ocean to Lila Keiser Park, and the Embarcadero area in front of the power plant.

Attachments:

Exhibit 6A: Morro Creek Limits of Floodplain (original) Exhibit 6B: Morro Creek Limits of Floodplain (revised)

Reviewed by: Rob Livick, PE/PLS Director/Floodplain Manager





Exhibit 4 A-3-MRB-11-001 53 of 64

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Exhibit 4 A-3-MRB-11-001 54 of 64



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Exhibit 4 A-3-MRB-11-001 55 of 64 **Earth Systems Pacific**



(805) 544-3276 • FAX (805) 544-1786 E-mail: esp@earthsys.com

February 1, 2012

FILE NO.: SL-16578-SA

Ms. April Winecki DUDEK 621 Chapala Street Santa Barbara, CA 93101

PROJECT: MORRO BAY AND CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT UPGRADES MORRO BAY, CALIFORNIA

- SUBJECT: Maximum Tsunami Flood Elevations
- REF.: Shoreline Erosion Study and 100-year Sea Wave Run-Up Analysis, Morro Bay and Cayucos Sanitary District Wastewater Treatment Plant Upgrades Morro Bay, California, by Earth Systems Pacific, dated October 25, 2011

Dear Ms. Winecki:

In accordance with your request, we have revised Cross Section A-A' in Appendix A of the referenced Shoreline Erosion Study and 100-year Sea Wave Run-Up report in response to the Coastal Commission staff's request to provide additional information on potential tsunami inundation at the Morro Bay Wastewater Treatment Plant (MBWWTP). It is our understanding that the California Coastal Commission staff requested additional information regarding potential maximum tsunami flood elevations at the MBWWTP site based on the applicable State tsunami inundation map; consequently, the cross section was revised to incorporate this information.

The State of California ~ County of San Luis Obispo Tsunami Inundation Zone Map for Emergency Planning, dated July 2009, was prepared by the California Emergency Management Agency. This map shows the MBWWTP site to lie within a Tsunami Inundation Zone Map, but does not show any tsunami flood elevations. The Tsunami Inundation Zone was based on a USGS quadrangle map with a scale of 1:24,000 or 1 inch = 2,000 feet, and an elevation precision that could vary up to 33 feet. Mr. Kevin Miller of the Earthquake & Tsunami Program, California Emergency Management Agency, was contacted regarding the elevations upon which the map was based. The Method of Preparation stated on the map indicates that it was prepared using bathymetric/topographic data that were used in the tsunami models which consisted of a series of grids. The near-shore grids with a 3 arc-second (75-to 90-meters) resolution or higher were adjusted to "Mean High Water" sea-level conditions, representing a conservative sea level

Exhibit 4 A-3-MRB-11-001 56 of 64



Morro Bay And Cayucos Sanitary District Wastewater Treatment Plant Upgrades

2

for the intended use of the tsunami modeling and mapping. A suite of tsunami source events was also used for modeling, representing realistic local and distant earthquakes and hypothetical extreme undersea, near-shore landslides. The MBWWTP site is located within a Tsunami Inundation Zone that was based on the maximum tsunami flood elevations that were obtained by the California Emergency Management Agency. These floods elevations were provided to us by Mr. Miller and are presented below.

Maximum Tsunami Flood Elevations

Local Worst Case Earthquake Source: Repeat of the 1927 Point Arguello 7.3 mag. earthquake. Maximum tsunami flood elevation from local source: 3.6 feet (NAVD 88 datum).

Distant Worst Case Earthquake Source: Aleutians Alaska 9.0 mag. earthquake. Maximum tsunami flood elevation from distant source: 23.9 feet (NAVD 88 datum).

The approximate elevation of the MBWWTP is 21 feet, which indicates that the maximum tsunami flood elevation from a distant worst case source earthquake event is 2.9 feet above the site elevation. The maximum tsunami flood elevation from a local worst case earthquake source event is 17.4 feet below the site elevation. For comparison purposes, the Shoreline Erosion Study and 100-Year Sea Wave Run-up Analysis prepared in October 2011 for the site estimated the maximum tsunami flood elevation to be 17.2 feet, when considered in conjunction with an eroded or scoured beach, a 100-year storm event, an extreme high tide, the projected 100-year rise in sea level, and the highest tidal surge documented for the March 11, 2011 8.9 magnitude Japan earthquake. The maximum tsunami flood elevations presented above are plotted on the attached Cross Section A-A'.

If there are any questions concerning this letter, please do not hesitate to contact the undersigned.

Sincerely,

Earth Systems Pacific

Richard T. Gorman, C.E.G.

Attachments: Cross Section A-A'

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Response to Questions Concerning MBCSD WWTP Upgrade Site Design and Flood Analyses

Question #1: When looking at Figure 2 (Current WWTP Site Constraints and Conceptual Site Plan) in the fine screening analysis, the way the conceptual site design is oriented, about 50% of it is in the blue hatched area (the areas subject to one percent or greater annual chance of flooding in any given year). Are there constraints that are preventing the conceptual design of the proposed development from being oriented in the areas within the site that are out of the blue hatched areas, but also still on the current parcel (and yes, is it possible to do this without displacing the RV park)?

The current location and layout was designed to minimize impacts to surrounding properties during flooding events. The facilities have been conceptually sited to allow the plant to sit in the "flood shadow" of the existing higher ground elevations located to the south and east. This can be seen on Exhibits 6A and 6B of the January 10, 2012 flood study addendum.

The potential for flooding at the site is not a static, but rather a flowing condition. Flood waters break out of Morro Creek at or near grid 246 (all subsequent grid references are to Exhibit 6A), flow north through grid 226 into grid 205, and then turn west. The dry land in grids 224, 225, 242, 243, and 244 effectively shelter grids 222, 223, and 224 from the flowing flood waters and therefore those are the ideal location for the upgraded plant facilities. To further minimize flood impacts, the plant facilities would have to be moved onto the higher topography within grids 242, 243, and 244; however, this would adversely impact the low-cost visitor serving facilities of the trailer park and would not result in perceptible benefits to the adjacent properties in the floodplain. Moving the plant facilities onto the trailer park storage area immediately east of the project site would also not result in measurable benefits to overall flood elevations.

Ultimately, following construction, the entire plant would be considered by FEMA to be outside of the 100 year floodplain. Further, in accordance with City of Morro Bay LCP Policy 9.03 (excerpt below), offsetting improvements have been incorporated into the project design and configuration.

LCP Policy 9.03

All development, including construction, excavation and grading, except for flood control projects and agricultural uses shall be prohibited in the 100-year floodplain areas unless off-setting improvements in accordance with the HUD regulations are required. Development within flood plain areas shall not cause further stream channelization, alignment modifications, or loss of riparian habitat values consistent with Section 30236 of the Coastal Act. Permitted development shall be consistent with all applicable resource protection policies contained in the Coastal Act and in the City Land Use Plan.

Exhibit 4 A-3-MRB-11-001 59 of 64 The Land Use Plan Map shall designate the flood prone lands at the western limits of the Morro and Chorro Valleys for agricultural uses.

Development in the flood prone areas within the City shall include finished floor elevations two feet about the 100 year flood elevation. The heights of permitted development shall be compatible with the character of the surrounding area and not conflict with scenic and visual qualities.

The majority of the site lies within a flood zone having a 1% annual chance of a 100-year flood (FEMA FIRM Map Number 06079C0813F, dated August 28, 2008). Additional developable area west of the existing treatment plant, which includes the dune area, is located within an area designated as having a 0.2% annual chance of a 100-year flood. Environmental Science Associates (ESA) prepared a site-specific Flood Hazard Analysis (August 2009) for the WWTP upgrade project, the recommendations of which were considered and incorporated into the project EIR and conditions of approval for the project. In response to the flood hazard analysis and associated EIR mitigation measures, a letter of map revision (LOMR) was filed with FEMA, which will tentatively become effective on December 21, 2011. The new floodplain map, although showing the lateral extent of 100-year flood waters expanding horizontally beyond the current applicable FIRM boundaries, actually lowers the vertical extent of the 100-year floodplain elevation at the site by 2 feet. Pursuant to mitigation measure 3.7-4 identified in the project EIR, the WWTP facilities have been located and clustered (utilizing two-story development, where feasible) on the southernmost portion of the City's property that is already elevated, and the project is designed to minimize the project footprint within the floodplain. When considering the floodplain boundaries as revised by the pending LOMR, the proposed WWTP upgrade project reduces the facility footprint within the floodplain by approximately 50% from existing conditions. In addition, project design includes grading plans which include approximately 35,000 cu. yds. of grading required to construct the WWTP facility at the site, primarily consisting of fill necessary to construct the upgraded facilities with a finished floor elevation of 2 feet above the 100-year floodplain consistent with FEMA regulations and LCP Policy 9.03.

Question 2: For this analysis we would like to have sea level rise considered for its effects on the site as it currently exists, as shown on Exhibit 6B of the Flood Study Addendum, done on Jan 10, 2012 [the flooding elevations shown in the "Morro Creek Limits of Floodplain (with surge and sea level rise)"].

The 100-Year Sea Wave Run-up analysis that Earth Systems Pacific prepared for the WWTP included a worst case scenario that combined a 100–year storm, a sea level rise of 55 inches (4.58 feet) per the year 2100 High Average Range of Models, and an extreme high tide condition. Under this scenario, using the existing beach slope of 4° per the topographic map, the analysis indicated the highest elevation that sea wave run-up would reach is elevation 15.7 feet. This elevation is approximately 300 feet to the west of the site. In addition, Atascadero Road and the RV Park lie between the project site and the beach. As they are situated at elevations 21 to 22 feet, their presence creates a 6-foot vertical buffer *in addition* to the 300-foot horizontal buffer that lies between the project site and the worst case condition run-up elevation. In view of this, the potential for wave run-up to reach the project site during its anticipated 100-year design life is extremely remote, even under worst-case conditions.

Exhibit 4 A-3-MRB-11-001 60 of 64 The flood study addendum shows that the impacts of the "perfect storm" (55" of sea level rise, 100 year flooding, and the maximum wave run up event) do not change the flood levels. The model actually shows a 0.01 foot drop in flood levels on the site, which is indicative that the impacts of the events are less than the error inherent in the model.

Summary Conclusions

The proposed, conceptual site location and layout was specifically designed to mitigate for potential onand off-site flood impacts, and is considered the best site configuration for the WWTP Upgrade facilities for the following reasons:

- As shown in the Flood Study Addendum (January 10, 2012), Exhibits 6A and 6B provide project-specific vertical (i.e., flood height) and horizontal (i.e., flood inundation extent) data (vs. the FEMA FIRM basemap shown with blue hatched marks on Figure 2 of the Fine Screening Analysis, which only shows horizontal inundation area) for both existing and "worst-case" scenarios. As depicted, the large majority of the existing WWTP site would be located within the flood zone under both scenarios. However, the vertical flood waters under the worst-case scenario (Exhibit 6B) with maximum storm surge and sea level rise would potentially only range from 0.25 feet (grid #200) to 4.77 feet (grid #222), and the proposed project fill would effectively raise all facilities outside of that range.
- 2. The proposed design reduces the total facility footprint within the floodplain by approximately 50% from existing conditions by clustering on the southernmost portion of the site. By minimizing development on the northern portion of the site, flood waters would more effectively flow across the site, thereby reducing impacts to neighboring facilities (from potential pooling or redirection of flows).
- 3. Although the WWTP facility footprint could potentially be re-oriented and/or relocated outside of the flood zone on the site, as indicated on Exhibits 6A and 6B, a redesign would be at the direct expense of the low-cost visitor-serving facilities of the RV park.



July 2, 2012

FILE NO.: SL-16578-SB

Mr. Dennis Delzeit, P.E. City of Morro Bay Public Works Engineering and Project Management 955 Shasta Ave Morro Bay, CA 93422

PROJECT: MORRO BAY AND CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT UPGRADES MORRO BAY, CALIFORNIA

SUBJECT: Response to Request for Additional Information

Dear Mr. Delzeit:

In accordance with your authorization, we have prepared a response to the California Coastal Commission staff (CCC) request for additional information regarding geologic/soil conditions at the Morro Bay Wastewater Treatment Plant (MBWWTP) Upgrade site. The questions concerned the erosion history of the dunes at the project site, risks to the existing WWTP if the dunes erode in the future, current measures employed to stabilize the dunes, and/or measures that could be taken to improve future dune stability and reduce erosion should the dunes become unstable. The scope of our work encompassed a site reconnaissance performed on June 15, 2012, review and interpretation of aerial photographs, review of previously prepared documents pertinent to the project site, and the preparation of this letter.

Question #1: Describe the erosion history of the dunes.

<u>Response</u>: The assessment of the dune erosion history at the site was estimated by reviewing vertical stereographic historical aerial photographs proximal to and covering the site. The photographs were taken in 1949, 1973, 1985, 1991 and 2002. These photographs were interpreted in combination with a topographic site map dated September, 2011.

The 1949 air photographs indicated that the eastern edge of the dunes trended near the western property boundary of the MBWWTP. Between 1949 and 1973 (the date of the next photograph), the RV park site and Atascadero Road were developed seaward of the existing WWTP site, eradicating a wide swath of dunes. Consequently, in 1973, the back edge of sand dunes is adjacent to the western side of Atascadero Road. Photographs taken in 1985, 1991, and 2002, show that the dune ridges have migrated marginally back and forth (to the east and west on the seaward side of Atascadero Road). In 2011, the landward edge of the dunes is in roughly the same alignment as that shown in the 1973 photograph for the southern 2/3 of the site, it then deviates in a westerly, or seaward direction in the vicinity of where Atascadero Road makes a right angle turn to the south.

Over the 38-year time span since 1973, the dunes have been exposed to several El Niño winters, the most severe of which occurred in 1982-83. This El Niño winter is considered to be the equivalent of a 100-year storm event. Comparison of the 1973 and 1985 air stereo photographs indicated that no significant erosion occurred along the dunes during this period, despite the severe storms of 1982-1983. Based on the assessment of the dune erosion history in the vicinity of the site, the dunes located seaward of the WWTP site are considered stable.

Exhibit 4 A-3-MRB-11-001 62 of 64


Morro Bay and Cayucos Sanitation District Waste Water Treatment Plant Upgrades 2

Question #2: Describe any and all measures that are now being taken to prevent blow outs or other disturbances that could cause dune erosion, deflation or inland migration.

<u>Response</u>: Based upon our site reconnaissance, the only measure currently being taken to reduce erosion and instability of the dunes is along Atascadero Road. Atascadero Road appears to be slightly inclined toward the RV Park; this results in surface water runoff from the road and RV Park being directed to the concrete curb that runs along the existing sidewalk in front of the RV Park. Atascadero Road slopes toward Morro Creek and the surface water runoff collected along the curb flows to the end of Atascadero Road and into an 8-inch storm drain pipe that extends into Morro Creek. This measure prevents surface water runoff from flowing into the dune sand area, which could cause erosion and instability.

Question #3: What will be the risks to the plant if the dunes erode, deflate, migrate or otherwise become unstable?

<u>Response</u>: The 100-Year Sea Wave Run-up analysis that we prepared for the MBWWTP included a worst case scenario that combined a 100-year storm, a sea level rise of 55 inches (4.58 feet) per the year 2100 High Average Range of Models, and an extreme high tide condition. Under this scenario, using the existing beach slope of 4° per the topographic map, the analysis indicated the highest elevation that sea wave run-up would reach is elevation 15.7 feet. This elevation is approximately 300 feet to the west of the site. In addition, Atascadero Road and the RV Park lie between the project site and the beach. As they are situated at elevations 21 to 22 feet, their presence creates a 6-foot vertical buffer *in addition* to the 300-foot horizontal buffer that lies between the project site and the worst case condition run-up elevation. In view of this, the potential for wave run-up to reach the project site during its anticipated 100-year design life is extremely remote, even under worst-case conditions.

A second wave run-up analysis was performed using the same coastal data as above; however, this scenario assumed that the dunes to the west side of Atascadero Road had been eroded away and consequently offered no protection from wave run-up. Under this scenario, a steeper transitional slope would develop between the lower beach and the higher elevation of Atascadero Road. For the purposes of the analysis, a beach angle of 10° adjacent to Atascadero Road was assumed. The steeper beach angle would compress the incoming waves, increasing their height and possibly resulting in overtopping of Atascadero Road. A wave run-up elevation of Atascadero Road and the project site, and could lead to inundation.

While the above scenario is theoretically possible, it is assumed the City of Morro Bay would likely have already taken steps to protect the existing infrastructure (which includes Atascadero Road, a gravity sewer main serving the visitor serving uses of the downtown and Embarcadero commercial areas of Morro Bay, and several water mains) and the RV Park, all of which exist seaward of the WWTP site, well before potential risks to the WWTP would need to be considered and addressed under this scenario. As discussed above, the dunes located seaward of the WWTP site, RV park and Atascadero Road have a history of stability and, as such, should the dunes become unstable in the future it is anticipated the vegetation maintenance measures discussed below would increase the stability of the dunes and further reduce potential risks to the existing development in the project vicinity and the WWTP site.

Exhibit 4 A-3-MRB-11-001 63 of 64



Morro Bay and Cayucos Sanitation District Waste Water Treatment Plant Upgrades 3

Question #4: Finally, what are the likely responses to dune instability?

<u>Response</u>: Studies have shown that vegetation is one of the primary stabilizing influences with respect to sand dunes. When not stabilized by vegetation, dunes can become unstable and will tend to migrate in the direction of the prevailing wind. During our site reconnaissance, extensive pedestrian traffic was observed throughout the dunes west of Atascadero Road. Dunes subject to pedestrian traffic were characteristically devoid of, or had little, vegetative cover. In contrast, dune areas that had little or no pedestrian traffic area were generally covered with dense vegetation. It was also noted that the less vegetated dune areas tended to have flatter slope angles and a more rounded shape compared to densely vegetated dune areas, which typically exhibited steeper slope angles and higher dune ridges. The steeper slope angles and higher dune ridges that characterize the less-travelled dune areas provide better protection against wave run-up. The dune areas west of Morro High School, approximately 250 feet northwest of the site, and are mantled with thick, well-established vegetation.

As described earlier, the dunes in the vicinity of the site have a history of stability and dune migration has been minimal. To preserve this stability, maintenance of existing vegetation and establishment (or reestablishment) of vegetation on bare or sparsely vegetated dunes is essential. The construction of raised wood access paths would enhance the growth and spreading of vegetation in the dune area west of Atascadero Road. The dune areas outside of the access paths could be considered "protected areas" and closed to pedestrian traffic to allow vegetation to become re-established.

We appreciate the opportunity to have provided services for this project and look forward to working with you again in the future. If there are any questions concerning this report, please do not hesitate to contact the undersigned.

No. CEG 1325

CERTIFIED

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Sincerely,

Earth Systems Pacific

Richard T. Gorman, C.E.G.

Copy to: Dudek, Attn: April Winecki

Doc. No.: 1206-072.LTR/sr

Exhibit 4 A-3-MRB-11-001 64 of 64





Figure 9. Alternative Site 5/15 Photo Plates

Photo 9-1. View of Site 5, Estero Terminal facilities from Highway 1 northbound lane, looking southeast across Toro Creek.



Photo 9-2. On Toro Creek Road, looking southwest across private farmland towards Site 5 and Morro Rock in the far distance.



Photo 9-3. From Toro Creek Road, looking north towards the potential WWTP development envelope on Site 15.



Photo 9-4. From Toro Creek Road, looking northeast across the potential WWTP development envelope on Site 15, towards adjacent irrigated farmland in the distance.





Photo 13-1. View from Highway 41 westbound lane, looking north towards the alternative project site.



Photo 13-2. From Highway 41 to the south of the site, looking northeast across a Morro Creek tributary towards the site's hillside terrain, currently utilized for ranching operations.

Figure 13. Alternative Site 16 Photo Plates



Figure 13. Alternative Site 16 Photo Plates

Photo 13-3. From existing site accessway, looking northwest towards the site's western slopes and residential development located within the City of Morro Bay peeking above the ridgeline.



Photo 13-4. Zoomed in view of residential and supporting farmland structures and landscaping located on the southernmost portion of the site that would feasibly be replaced by WWTP facilities.

Effluent Disposal

In review of the disposal opportunities at Site 1, it is determined that the existing Ocean Outfall is the most feasible disposal option and is used as the basis for the alternative site comparison analysis.

Ease of Property Acquisition

Moving forward with a project at Site 1 will not require acquisition of additional parcels. Because the site is already used for the existing WWTP, it is not anticipated that the site contains hazardous materials or will create additional noise and odor concerns.

Economic Factors

The WWTP alternative analysis must minimize capital and life cycle costs. Process selection and project definition is well documented in previous facility planning studies.

A summary of the major capital cost components associated with implementation of a replacement WWTP project at Site 1 are included in Table 6.

WWTP Cost Component	Site 1 Cost
Decomissioning/Demolition of Existing WWTP	\$1,400,000
Earthwork (Rough Grading, Soil Stabilization)	\$2,487,000
Sitework (Fine Grading, Yard Piping, Paving)	\$2,383,000
Influent Pump Station	\$829,000
Residuals Handling	\$3,834,000
Secondary Treatment (Oxidation Ditch/Clarifier)	\$8,185,000
Tertiary Filtration & Disinfection	\$2,383,000
Standby Power	\$518,000
Maintenance / Electrical Building	\$1,036,000
Operations Building	\$1,244,000
Household HW Station	\$208,000
Equalization Basin	Not Required
Effluent Pump Station	Not Required
Construction Contingency	\$4,044,000
Subtotal WWTP	\$28,551,000
Interim Upgrades of Existing WWTP	\$1,630,000
Collection System Pumping	Not Required
Offsite Conveyance - Influent	Not Required
Offsite Conveyance - Effluent Disposal	Not Required
TOTAL SITE 1 CAPITAL COST	\$30,181,000

Table 6. Site 1 Capital Costs

Capital Cost Assumptions

The opinion of probable construction costs (OPCC) for Site 1 alternative is based on estimates presented in the Facilities Master Plan and subsequent Amendment 1 and Amendment 2. Costs were escalated to

Page

current September 2011 dollar values using ENR Construction Cost Index (ENR, CCI = 9116). Backup for the treatment facility component costs are well documented in previous studies. Of particular interest to this alternative site analysis is the distinguishable components between alternatives including:

• <u>Soil Stabilization</u> – Vibro-compaction treatment is recommended within the limits of major structures at Site 1. This is consistent with previous geotechnical recommendations at the site, and is assumed to be valid for the WWTP replacement project. Previous studies utilized a unit cost of \$1 Million per acre of treated area. The extended cost for Site 1 is assumed to be \$1.4 Million.

• <u>Flood Mitigation</u> – The Site 1 alternative includes placement of approximately 8,000 cubic yards of imported, engineered fill to raise the WWTP site above the projected 100-year flood plain elevation. The estimated cost for flood mitigation is \$1,000,000 per FMP Amendment 1.

• <u>Offsite Conveyance</u> – Since Site 1 is also the terminus of the existing wastewater collection system, no significant offsite pipelines are required. Costs have been included for extending the trunk sewer approximately 200 feet across the site to the new lift station location.

• <u>Influent Pumping</u> – The influent pump station for Site 1 requires only minimal pumping energy since the lift station operating head is relatively low, only needing to overcome minimal static head into the onsite headworks and necessitating only minimal forcemain length.

• <u>Disposal</u> – Since the ocean outfall is on Site 1, only minimal outfall piping modifications will be required.

Operating Cost Assumptions

Operating costs for the proposed WWTP alternative include treatment and conveyance costs. The treatment costs are based primarily on operations and maintenance (O&M) costs estimated in the Facilities Master Plan. The O&M costs and 30-year net present worth value is presented in Table 7.

Operating Cost - Annual Basis		
Annual WWTP Maintenance	\$286,000	
WWTP Operations	\$1,319,000	
Collection System Pump Station Maintenance	Not Required	
Collection System Pump Station Operations	Not Required	
Offsite Forcemain Maintenance	Not Required	
Effluent Pipeline Maintenance	incl. above	
Total Annual O&M	\$1,605,000	
Operating Cost - 30-year Present Worth		
WWTP O&M	\$24,680,000	
Offsite Conveyance O&M	\$0	
Subtotal Present Worth	\$54,861,000	
Soft Costs (Planning, Engineering, Administration, Legal)	\$7,102,000	
Property Acquisition	Not Required	
TOTAL NET PRESENT WORTH OF SITE 1	\$61,970,000	

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Page

56

Table 20. Site 16 Capital Costs

WWTP Cost Component	Site 16 Cost
Decommissioning/Demolition of Existing WWTP	\$1,680,000
Earthwork (Rough Grading, Soil Stabilization)	\$2,760,000
Sitework (Fine Grading, Yard Piping, Paving)	\$2,383,000
Residuals Handling	\$3,834,000
Secondary Treatment (Oxidation Ditch/Clarifier)	\$8,185,000
Tertiary Filtration & Disinfection	\$2,383,000
Standby Power	\$518,000
Maintenance / Electrical Building	\$1,036,000
Operations Building	\$1,244,000
Household HW Station	\$249,000
Equalization Basin	Not Required
Effluent Pump Station	Not Required
Construction Contingency	\$4,855,000
Subtotal WWTP	\$29,127,000
Interim Upgrades to Existing WWTP	\$3,910,000
Collection System Pumping	\$5,397,000
Offsite Conveyance - Influent	\$1,690,000
Offsite Conveyance - Effluent Disposal	\$1,630,000
TOTAL ALTERNATIVE CAPITAL COST	\$41,754,000

Capital Cost Assumptions

The opinion of probable construction costs (OPCC) for Site 16 alternative is based on estimates presented in the Facilities Master Plan and subsequent Amendment 1 and Amendment 2. Costs were escalated to current September 2011 dollar values using ENR Construction Cost Index (ENR, CCI = 9116). Backup for the treatment facility component costs are well documented in previous studies.

Conveyance facilities were estimated using typical unit costs based on installed horsepower to provide necessary firm pumping capacity and order of magnitude costs for pipelines based on diameter and length. Of particular interest to this alternative site analysis is the distinguishable components between alternatives including:

• <u>Influent Pumping</u> – It is assumed that all flow collected at the collection system terminus on the existing WWTP site would need to be pumped through a joint facilities pump station up to Site

16.

- <u>Offsite Conveyance</u> Forcemain of approximately 1.1 miles is required to convey raw wastewater from the collection system terminus to Site 16.
- <u>Disposal</u> Disposal options for Site 16 were discussed previously. The cost estimate assumes a new land outfall pipe to convey treated effluent back to the existing site for ocean disposal via the existing ocean outfall.

Page 166

Operating Cost Assumptions

Operating costs for the proposed WWTP alternative include treatment and conveyance costs. The treatment costs are based primarily on operations and maintenance (O&M) costs estimated in the Facilities Master Plan. The O&M costs and 30-year net present worth value is presented in Table 21.

Operating Cost - Annual Basis		
Annual WWTP Maintenance	\$292,000	
WWTP Operations	\$1,319,000	
Influent Pump Station Maintenance	\$54,000	
Influent Pump Station Operations	\$134,000	
Forcemain Maintenance	\$9,000	
Effluent Pipeline Maintenance	\$9,000	
Total Annual O&M	\$1,817,000	
Operating Cost - 30-year Present Worth		
WWTP O&M	\$24,770,000	
Offsite Conveyance O&M	\$3,170,000	
Subtotal Present Worth	\$69,694,000	
Soft Costs (Planning, Engineering, Administration, Legal)	\$12,526,000	
Property Acquisition	\$7,500,000	
TOTAL NET PRESENT WORTH OF SITE 16	\$89,730,000	

Table 21. Site 16 O&M Costs and Present Worth Costs

Page 167

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CALIFORNIA COASTAL COMMISSION GENTRAL GOAST AREA

April 12, 2011

Dear California Coastal Commissioners,

As you know, many Morro Bay and Cayucos citizens are concerned about the work currently underway, to resolve the issues raised by the CCC in regard to the Morro Bay/'Cayucos wastewater treatment plant (WWTP) project. This letter includes recent local developments and some of residents' concerns regarding the issues.

Apparent Plan for an "End Run" Around the CCC

WWTP project manager Dennis Delzeit's April 1 "Status Report on Upgrade Project as of April 1, 2011" refers to a "Plan B" project, as follows: "Plan B is a possible alternative that could provide full secondary treatment <u>while</u> <u>being exempt from the issuance of a coastal development permit</u>. The MBCSD staff is continuing to explore the potential concepts. Meeting all of the parameters is complex and the solution is not ready for presentation to the JPA at this time." (emphasis added)

Clearly, the reasons for residents' concerns regarding this statement require no explanation. However, it has been suggested that the true nature of the "end run" might not be what it appears to be. It has been suggested that the alleged "Plan B" mentioned by Mr. Delzeit could be imaginary – a subterfuge created to make the statement, "Let us put our plant where we want it, or we will do a different project and you'll only get secondary-treated water instead of tertiary" or, as phrased by one skeptical resident, ""I'm taking the ball and going home and I'm NEVER gonna play wif you again!". The question has been raised, "If there is really is a "Plan B" in the works, why would those involved give themselves away by mentioning it now?"

As has been stated in earlier communications, staff and officials of the City of Morro Bay and the Cayucos Sanitary District appear literally desperate to build the WWTP at their preferred site. Although the reasons are not yet completely clear, one possibility that has been suggested is that there is a great deal of illegal infrastructure under the ground in the area – infrastructure that would be discovered if the site were converted to other uses. It has been suggested that such infrastructure might be connected to the neighboring concrete plant and/or to the desal plant. Another suspicion is that there is some connection with a major planned development in the area.

Alternative WWTP Site Analysis

A key concern of residents is the possibility and, according to some, the likelihood, that the alternative site analysis to be undertaken by the City of Morro Bay and the Cayucos Sanitary District will be nothing more than a "dog and pony show". Many residents suspect that the "study" will deliberately include only unsuitable sites – a strategy to drive the project back to the site favored by staff. One inside source has in fact stated that he was told that this is indeed the City's plan.

One example has already been identified – the Chorro Valley, which Morro Bay City staff members have said will be included in the analysis. They plan to spend taxpayer money evaluating this site and yet, according to the WWTP DEIR, "...moving the plant from its existing location to the Chorro Valley location would not avoid any significant impacts of the proposed project, while potentially creating several new significant environmental impacts." In addition, during the recent rains there was major flooding in the Chorro Valley, and some homes were inundated. The Chorro Valley site lies directly over the Chorro Valley aquifer, which includes many underground streams.

Exhibit 6 A-3-MRB-11-001 1 of 363 Why would the City and the District even think of including this previously-rejected, flood-prone site in a truly serious study of alternate sites?

In addition, some proposed sites are in agricultural areas. It has been suggested that there might be a plan to "evaluate" them, with the intention of eliminating them afterwards by citing the California Public Resources Code, and policies from the City of Morro Bay's Local Coastal Plan – thus, once again, forcing the project back to the site desired by the City and the District. Following are examples of State law and associated LCP policy that might be used in that way:

California Public Resources Code, Sec. 30242. "All other lands suitable for agricultural use shall not be converted to non-agricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Policy 6.03 All non-prime land within the City of Morro Bay suitable for agricultural use shall not be converted to non-agricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Public Resources Code Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

I have attached to this letter an excerpt from the Morro Bay LCP. It includes additional laws and policies regarding acceptable uses for agricultural land. It seems quite possible that sites on or adjacent to agricultural land **might** be used for the WWTP. However, I believe it is clear that a careful review of State law and LCP policies should be done **before** any taxpayer dollars are spent on in-depth studies of such sites.

Would the City and the District actually spend several hundred thousand dollars on a sham study aimed at achieving their own objectives instead of identifying the best WWTP site? Clearly, we do not have the answer to that question.

However, Morro Bay residents have voiced some serious concerns with past studies done by consultants hired by the City. As reported in the May, 2010 SLO Coast Journal article, "Morro Bay Residents Call for More Oversight of City Staff", in the summer of 2009, a City-hired consultant was reported by residents for conducting an alleged "stream flow interference study" on a stream that had no flow. It was totally dry at the time.

The story reported that, "For about two weeks in late July and early August, 2009, Cleath-Harris Geologists personnel were observed working with Morro Bay City staff in the Ashurst well field, located near the end of Chorro Creek Road. Their observed activities included installation of rented and permanent pipes and the pumping of over 2 million gallons of water from the wells. The water was dumped in a nearby field.

This action was subsequently found to have violated California State Water Resources Control Board (SWRCB) decision 1633..."

An October, 2010 SLO Coast Journal story, "The Strange Saga of Morro Bay's Stream Interference Study", (attached) updated the story, reporting that the same consultant was later retained by the City to make another attempt, but was stopped by the Department of Fish and Game due to failure to obtain the required permits.

Exhibit 6 A-3-MRB-11-001 2 of 363

Lobbyist Hired by Morro Bay and Cayucos

As you know, the City of Morro Bay and the Cayucos Sanitary District have hired a lobbyist, at taxpayer expense. Many residents believe that the sole purpose of the lobbyist is to attempt to convince you to ignore the problems and issues identified by your staff and to OK the currently-planned project at the site favored by the City and the District. Not only does this action appear to show considerable disrespect for the outstanding work done by you and your staff; it stands to cost taxpayers a great deal of money.

In his April, 2011 report, "Discussion of Advocacy Consultant Status Report", WWTP project manager Dennis Delzeit states, "Assuming that McCabe & Company services will be provided for a total of twelve months and the outside expenses will be \$5,000, the total fee will be in the range of \$155,000.

Attached to this letter is a copy of an April 3, 2011 memo sent by the lobbyist to Delzeit. It summarizes the lobbyist's work to date, and lays out suggested next steps to be taken, including:

- "Providing briefings to Coastal Commissioners on a periodic basis, as appropriate, with particular emphasis on the commissioner representing the South Central Coast Region;
- Identifying and mobilizing support for the project, and creating appropriate messages for those entities;
- Developing appropriate oral and written communications (briefing materials) for Commissioners and Staff; and
- Assisting in preparing effective oral and Power Point presentations for the Coastal Commission hearing(s) on the project and recommending appropriate speakers for the public hearing(s)."

The memo's content has raised a number of concerns. One of those was triggered by this comment regarding the alleged views of CCC staff: "Staff recognizes the water quality benefits provided by the project and made clear that their primary concern with the proposed project was lack of a thorough alternatives analysis of other sites that might be preferable....." This statement appears to completely ignore some very critical issues raised in your staff's November 12, 2010 review of the project DEIR, which included the following findings:

Page 2: "Under the current proposal, the new WWTP would produce a large quantity of highly treated wastewater, and the vast majority of it would be disposed of through the ocean outfall. This would not only cause unnecessary impacts on the marine environment, but it would also prevent the 'City and adjacent areas of the County from utilizing this freshwater source to help sustainably meet the region's water supply needs, and it could frustrate Coastal act marine resource policies related to the use of an ocean outfall for disposal in this location."

Page 9: "The availability of water in Morro Bay has improved since the late 1980's and early 1990's due to the arrival of water from the State Water Project in 1997. However, as described in the City's Water Management Plan Status Report of December, 2008, the reliability of water has decreased due to judicial decisions regarding endangered fish species and concerns about global warming. In addition, the use of State Water is extremely energy intensive and has significant environmental impacts far removed from Morro Bay, including impacts on anadromous fish and other species in the Delta. These, and other State water concerns highlight the general issue associated with ensuring that appropriate measures are taken to move towards and ensure a sustainable local water supply."

Exhibit 6 A-3-MRB-11-001 3 of 363

Continued Unwillingness to Take Responsibility for Problems

The City of Morro Bay and the Cayucos Sanitary District still appear to refuse to accept any responsibility for project delays and cost overruns. Project manager Dennis Delzeit's "Status Report on Upgrade Project as of April 1, 2011" states, "The current project is off schedule due to the CCC appeal process." There is no mention of the possibility that it is off course because the City and the District failed to follow recommendations made in 2008 by Coastal Planner Mike Watson, and failed to work proactively and cooperatively with CCC staff during the project stages leading up to the publishing of the DEIR.

Recently, a Morro Bay City employee told a resident that the WWTP was going to cost more than it should "because of the CCC". Again, there was no suggestion by the employee that the City and the District bear the responsibility in light of their own failures.

Interestingly, since the issuance of the CCC's report on the DEIR, there has been no publicly-reported discussion by the City and the District of the fact that PERC Water could deliver a plant for millions less, using the latest technology and producing effluent treated to the highest standards. PERC completed a customized plant design which could reportedly be built on any site, but did not deliver it because the Morro Bay and Cayucos staff refused to sign a non-disclosure agreement and left the PERC option out of the DEIR. Despite the fact that a technically-superior and lower-cost alternative not only exists, but has been fully designed, those in charge of the project appear determined to pursue a far more costly solution that employs outdated technology and fails to deliver any significant water reclamation benefits.

Alleged Propaganda Beginning to Appear in Local News

An April 11 article that appeared in the San Luis Obispo Tribune (attached) appears, according to residents, to be the beginning of a propaganda campaign designed by the lobbyist hired by the City and the District. Among the statements residents find highly questionable are these:

"Moving the treatment plant will cost tens of millions of dollars more, and residents have been adamant that they want costs kept down," Yates said.

"Possible alternative locations for the treatment plant include unused portions of the Morro Bay power plant and Chevron's defunct oil terminal midway between Morro Bay and Cayucos.

But these sites pose an additional problem, Yates said. The city would have to use eminent domain condemnation to acquire them."

Residents point out that the City and the District have provided no sound basis for claims that moving the facility would cost "tens of millions", and that past decisions on the project have indicated little-to-no interest in saving taxpayer money. They also note that there has been no study to determine if there are viable sites the City and the District might purchase, nor has there been a study to determine what the City and District might earn from visitor-serving and other recreational uses for the current beachfront plant site.

This concludes the discussion of some of the recent developments and some of the currently-outstanding resident concerns regarding the Morro Bay/Cayucos WWTP project. Documents containing all of the staff comments referenced above can be found in attachments to the agenda for the Morro Bay/Cayucos April 14, 2011 JPA meeting, available on the City of Morro Bay Web site under the topic, "Agendas & Minutes".

Exhibit 6 A-3-MRB-11-001 4 of 363 Sincerely,

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Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442 Istedjee@charter.net

Exhibit 6 A-3-MRB-11-001 5 of 363

Excerpts from Morro Bay Local Coastal Plan, Chapter VIII. Coastal Agriculture

California public resources code:

30241 The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas of agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

- (a) By establishing stable boundaries separating urban and rural areas including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.
- (b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses and where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development
- (c) By permitting conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.
- (d) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of prime agricultural lands"

Sec. 30242. "All other lands suitable for agricultural use shall not be converted to non-agricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Sec. 30250(a). "New residential, commercial or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to existing developed areas able to accommodate it, or where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

Notwithstanding the forgoing discussion of agricultural suitability of specific sites, the City has attempted to meet the Coastal Act through the following policies. By necessity the City policies listed in this section address more than the coastal zone area contained within the corporate limits of Morro Bay.

Policy 6.01 The City and the City/County through cooperative review and permitting arrangements, shall maintain the maximum amount of "prime" agricultural land (as defined in Section 30113 of the Coastal Act and as identified through consultation with the U.S.D.A. Soils Conservation Service) in agricultural production to assure the protection of the area's agricultural economy. The City shall join with the county in a cooperative planning management to assure that conflicts shall be minimized between City and County agricultural and urban uses through all of the following:

Exhibit 6 A-3-MRB-11-001 6 of 363

- (a) By joint planning efforts to establish stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.
- (b) By limiting conversion of agricultural lands around the periphery of the city to lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses and where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development
- (c) By permitting the conversion of agricultural lands surrounded by urban uses where conversion of the land would be consistent with PRC Section 30250.
- (d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.
- (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (f) By assuring that all diversions of prime agricultural lands, except those conversions approved pursuant to subdivision (B), and all development adjacent to prime agricultural lands shall not diminish productivity of prime agricultural lands.

Policy 6.02 The City shall implement the following standards, or implement the standards in cooperation with the County in a City/County review process:

- (a) Notification for the purpose of comment of any division of land, permit activity, or grading in the Morro and Chorro watershed (as contained in the coastal Zone boundary) to the city for review and recommendations.
- (b) City/County use of "Best Management Practices" to control agricultural practices that would result in sedimentation, contamination of the basins, or misuse of water resources.
- (c) City/County Water Basin management planning in cooperation with other affected agencies.
- (d) Implementation of City Water Management plans activities and facilities where it involves unincorporated lands; and County limitation fo further land development which intensifies use of groundwater resources in the Morro and Chorro Basins until a comprehensive water management plan is adopted by the City and joint groundwater management programs have been formulated.
- (e) Locate new residential, commercial or industrial development within, contiguous with, or in proximity to, existing developed areas able to accommodate it, or where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, provide that land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

Policy 6.03 All non-prime land within the City of Morro Bay suitable for agricultural use shall not be converted to non-agricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Public Resources Code Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Policy 6.04 All non-agricultural development permitted on non-prime agricultural lands shall preserve the maximum amount of lands in agricultural use. In approving any land divisions or non-agricultural use, all of the following findings shall be made by the City:

Exhibit 6 A-3-MRB-11-001 7 of 363

- (1) Continued or renewed agricultural use is not feasible without the proposed division and/or supplemental non-agricultural use
- (2) The proposed division and/or use will allow for and support the continued use of the site as a productive agricultural unit, would contribute to long term agricultural viability andwould preserve agricultural lands.
- (3) The proposed division and/or use will result in no adverse effect upon the continuance or establishment of agricultural uses on the undeveloped portion of the property or on surrounding or nearby properties.
- (4) Buffer areas are provided between agricultural and non-agricultural uses.
- (5) Adequate water supply, sewage disposal and other public services are available to service the proposed development after provision has been made for the continuance of existing agricultural operations and future operations which may require water needs exceeding the present needs.
- (6) The proposed division and/or use will not adversely impact environmentally sensitive areas, scenic resources or the rural character of the site, where applicable. Where new non-agricultural developments are permitted on lands in or previously in agricultural production, sensitive habitats shall be protected, restored and enhanced as a condition of development approval.

Policy 6.05 Where continued agricultural use is not feasible without some supplemental non-agricultural use, priority shall be given to public recreational uses, visitor-serving recreational and visitor-serving commercial use. All division and/or non-agricultural development on non-prime agricultural lands shall require a City-approved development plan showing how the proposed division or development would affect the subject property. In reviewing a proposed development plan and determining the density of permitted use, the City shall require the following conditions:

- (1) Development shall be clustered to retain the maximum amount of agricultural land in agricultural production or available for agricultural use. No more than 2% of the gross acreage of the property shall be converted to non-agricultural uses (including roads and public works). Residential density shall not exceed one dwelling unit per 20 acres. The remaining acreage shall be left in agricultural production and/or open space if agricultural uses are found to be infeasible. Development shall be located close to existing roads and shall be sited to minimize impacts on scenic resources, wildlife habitat and streams and adjacent agricultural operations.
- (2) Prime agricultural land, as defined in Policy 6.01 shall not be removed from production unless consistent with PRC Section 30241.
- (3) Land divisions or development proposals shall include a means of permanently securing the remaining acreage in agricultural use, such as agricultural preserves, open space easements, or granting of development rights. Covenants not to further divide shall also be executed and recorded prior to issuance of development permits.
- (4) The creation of a homeowners' or other organization or the submission of agricultural management plans shall be required to provide for continued agricultural use of agricultural lands and their availability either on a lease or purchase basis. Such organizations or plans shall also provide for the maintenance of water or road systems.
- (5) Agricultural lands supplemented by development shall be accompanied by covenants or other suitable recorded mechanisms to ensure the maintenance of buffers.

Policy 6.06 The City shall participate in the efforts of the Coastal Conservancy or other public or private agencies to implement agricultural enhancement programs. These programs may include but are not limited to:

- (1) Coastal Conservancy purchase of development rights or fee interest in agricultural lands
- (2) Agricultural preservation fees from new development

Exhibit 6 A-3-MRB-11-001 8 of 363

- (3) Transfer of lands to public or non-profit agencies which will lease back for agriculture, retain life estates for current owners, operate "agriculture parks", community farms or experimental agricultural stations.
- (4) Assistance programs (water subsidies, recycling methods, fencing and other buffers, low-cost agricultural loans
- (5) Reduction in City tax assessments based on use and lack of need for urban services and removal of inlieu fees (i.e., Parks and Recreation) where partial site development occurs and agricultural land is maintained.

Policy 6.07 The City's Urban/Reserve and Urban Services Line shall be drawn as follows: include all area within the City limits but exclude the Cabrillo property and the portion of the Williams property which is outside of the approximately 38 acre area adjacent to Highway One and designated for commercial and open area uses.

Policy 6.08 The city shall impement the following revisions to its LUP land use map to preserve and protect the long term productivity of agricultrual lands within and adjacent to the community:

- (1) Designate the Cabrillo property for agricultural land use with a minimum allowable parcel size of 40 acres.
- (2) Permitted use on prime and non-prime agricultural lands shall be agricultural use for cultivation of crops or grazing of livestock and non-residential development accessory to agricultural operations. The following uses shall be conditionally allowed:
 - a. One single family residence
 - b. Farm labor quarters
 - c. Public coastal accessways
 - d. Greenhouse and nurseries

Conditional uses can be permitted on prime lands where it is demonstrated through City findings that no alternative building site exists except on the prime agricultural lands, that the least amount of prime land possible is converted and that use will not conflict with surrounding agricultural lands and uses.

Exhibit 6 A-3-MRB-11-001 9 of 363

From the October, 2010 issue of the SLO Coast Journal

The Strange Saga of Morro Bay's Stream Interference Study

by Kari Olsen

Synopsis: Despite the failure of the 2009 Chorro Valley stream interference test, which was invalidated because the stream was dry at the time of testing, the City of Morro Bay has continued to use the consulting firm that performed the 2009 work. A list of invoices obtained from the Morro Bay City Attorney appears to indicate that although the 2009 test was a failure, the consulting firm was paid, and was paid again, in 2010, to redo the failed test. It appears that thus far, Morro Bay taxpayers have paid \$60,054.81 for a stream interference test project that was originally supposed to cost \$25,000 and that was to have included the writing of a report on the test findings. No report has been produced to date.

Despite the failure of the 2009 Chorro Valley stream interference test, which was invalidated because the stream was dry at the time of testing, the City of Morro Bay has continued to use the consulting firm that performed the 2009 work. A list of invoices obtained from the Morro Bay City Attorney appears to indicate that although the 2009 test was a failure, the consulting firm was paid, and was paid again, in 2010, to redo the failed test.

In June, 2010, the second stream interference test was conducted. This time, creek flow levels were at an acceptable level, but the consultant failed to obtain the necessary permits, arousing the ire of the Department of Fish and Game and local environmental groups.

According to the consultants' proposal, signed by Timothy Cleath and Morro Bay Capital Projects Manager Dylan Wade, the objective of the 2009 study was to obtain permission from the State Water Resources Control Board (SWRB) to use City wells in the Chorro Valley when stream flow downstream of the wells is less than 1.4 cubic feet per second.

The scope of work specified in the proposal document included preparation of a testing plan, installation of two flumes on Chorro Creek, monitoring of flow to determine the impact of well pumping on the creek, removal of the flumes, and preparation of a report "documenting results of stream flow interference testing." The cost to the City was estimated to be about \$25,000.

As reported in the May, 2010 SLO Coast Journal article, "Morro Bay Residents Call for More Oversight of City Staff," in the course of the 2009 test, over two million gallons of water were pumped from Chorro Valley wells and dumped in a field. However, residents questioned how the impact of the well usage on the stream could possibly have been measured, because the stream was completely dry in the area of the test.

As reported in the Journal, the consultants were found to have violated California State Water Resources Control Board (SWRCB) decision 1633, which states in part, "For the protection of fish and wildlife habitat and other public trust resources in Chorro Creek and Morro Bay, beginning when deliveries are available from the State Water Project Permittee shall: Cease all diversions from wells 9, 9A, 10, 10A, 12 and 16 or from any wells constructed and operated as replacement wells for the Ashurst well field, whenever surface flow measured in Chorro Creek downstream of the Ashurst well field is less than 1.4 cubic feet per second."

In June, 2010, the stream flow was at an acceptable level, and a second attempt at the stream interference test was in progress when it was interrupted by a visit from a Department of Fish and Game agent, who reportedly informed those present that the consultants and the City had failed to obtain the necessary permits. At that time, several Morro Bay City officials including Public Services Director Rob Livick, Capital Projects Manager

Exhibit 6 A-3-MRB-11-001 10 of 363 Dylan Wade, and Morro Bay City Attorney Robert Schultz were observed to be present at the test site. City officials have held that the consultants, not the City, were responsible for obtaining permits. According to Schultz, "the stream flow study was performed by the City's consultant, Cleath Harris Geologists and they were responsible for obtaining all government approvals."

On September 4, 2010, Schultz was asked to provide a copy of the consultants' report on the stream interference study. However, although the report was listed as a deliverable in the consultants' 2009 proposal, Schultz responded that, "The City is not in possession of any 'stream flow study report for the most recent stream flow test conducted at Chorro Creek by Cleath Harris Geologists.' In addition, once such a report is received by the City, the document may be exempt from the CPRA pursuant to Government Code Section 6254 (b) (k)."

Schultz did not explain the government code references, but they refer to documents related to litigation and to evidence. According to a spokesperson for a local environmental group, the Department of Fish and Game is in the process of filing charges against the consultants.

In response to concerns regarding the delay in producing a report, Schultz said, "The study on the stream flow is ongoing and may take a few years to complete and produce a report." A request for an explanation regarding the apparent conflict between this statement and the consultants' original proposal has thus far gone unanswered.

A list of invoices provided by the City indicates that between June 30, 2009 and August 26, 2010 Cleath Harris Geologists have submitted to the City a total of 12 invoices for work related to Chorro Stream flow monitoring and testing. According to the document, all were paid. 2009 invoices were submitted in the amounts of \$920, \$21,145.13, \$2,553.20, and \$676, totaling \$25,294.33. In 2010, there were invoices for \$398.25, \$818.30, \$855.50, \$1,624.50, \$1,124.00, \$6,220.97, \$16,907.86, and \$6,811.10, totaling \$34,760.48. The grand total of the invoices for 2009 and 2010 is \$60,054.81.

Thus it appears that thus far Morro Bay taxpayers have paid \$60,054.81 for a stream interference test project that was originally supposed to cost \$25,000 and that was to have included the writing of a report on the test findings. No report has been produced and now, a report is evidently not expected for "several years," and errors have put the City in danger of being fined by the SWRCB for the 2009 violation.

Exhibit 6 A-3-MRB-11-001 11 of 363

MEMORANDUM

TO:Dennis Delzeit, Project ManagerFROM:McCabe & Company (Susan McCabe & Anne Blemker)RE:Morro Bay/Cayucos WWTP Coastal Issues Progress SummaryDATE:April 3, 2011

ACTIVITY SUMMARY

McCabe & Company was retained by the Morro Bay-Cayucos Sanitary District (MBCSD) to provide an analysis of the appeals of the wastewater treatment plant (WWTP) upgrade project filed with the Coastal Commission and to provide a preliminary analysis as to the feasibility of obtaining Coastal Commission approval of the project. To date, we have conducted the following activities:

- Communicated with Coastal Commission Santa Cruz District staff by phone and e-mail and coordinated a meeting with Coastal Commission staff following the Substantial Issue hearing on March 11, 2011;
- Conducted a site visit of the project site and visited several alternative sites discussed in the EIR and identified by appellants;
- Participated in a strategy session with project representatives to discuss process and timing;
- Attended the Coastal Commission's Substantial Issue hearing and participated in a subsequent meeting with Coastal Commission staff to discuss appeal issues, supplemental information requested by Commission staff, and a processing timeframe;
- Participated in MBCSD team debriefing session to discuss the meeting with Coastal Commission staff; and
- Engaged in periodic communications with project manager, Dennis Delzeit, regarding the project and next steps.

Exhibit 6 A-3-MRB-11-001 12 of 363

MEETING WITH COASTAL COMMISSION STAFF

Upon review of the appeals of the WWTP project and related documents and participation in a meeting with Coastal Commission staff, we offer the following observations.

The meeting with Coastal Commission staff (District Director Dan Carl and Staff Analyst Madeline Cavalieri) was both informative and productive. The purpose of the meeting was to develop a clear understanding of the Commission staff's concerns relating to the project and actions MBCSD could take to address those concerns. Staff recognizes the water quality benefits provided by the project and made clear that their primary concern with the proposed project was a lack of a thorough alternatives analysis of other sites that might be preferable to the proposed project location from a Coastal Act perspective. Absent such an analysis, they said they could not conclude that the proposed project location is the best site under the standards of the Coastal Act and the Morro Bay Local Coastal Program (LCP). They offered to coordinate with MBCSD to develop a list of alternative sites to be analyzed, as well as criteria under which the sites should be reviewed. We discussed the other issues raised in the Commission appeals (reclaimed water, plant capacity, hazards, archeology, and public views) and agreed to provide supplemental information requested by Commission staff for their review of the project. We believe that if an alternatives analysis demonstrates that the proposed location for the WWTP is the most appropriate location for the project, Commission staff will be open to recommending approval of the project and that other issues raised in the appeal could be dealt with through conditions to the permit.

PROPOSED NEXT STEPS AND ROLE OF MCCABE & COMPANY

The meeting with Commission staff resulted in a better understanding of the issues raised by the Commission appeals and a road map MBCSD can follow to provide Commission staff with necessary supplemental information by which Commission staff can thoroughly evaluate the proposed WWTP project. Below is a list of activities we would propose that MBCSD undertake with the assistance of McCabe & Company leading up to and through Coastal Commission action on the WWTP project.

 Coordinating with MBCSD's technical consultants to ensure that supplemental studies and data submittals are responsive to Coastal Commission staff concerns and data gaps in the policy areas identified in the Commission appeals (alternatives analysis, water reclamation plan, plant capacity, coastal hazards, archaeological resources, public views);

- Coordinating with Coastal Commission staff to facilitate timely communication exchanges and expeditious review of data submittals;
- Developing and communicating MBCSD's position on the project to Coastal Commissioners, Coastal Commission staff, regulatory agencies, other elected and appointed officials, decision-makers and stakeholders involved with the project;
- Providing briefings to Coastal Commissioners on a periodic basis, as appropriate, with particular emphasis on the commissioner representing the South Central Coast Region;
- Identifying and mobilizing support for the project, and creating appropriate messages for those entities;
- Developing appropriate oral and written communications (briefing materials) for Commissioners and Staff; and
- Assisting in preparing effective oral and Power Point presentations for the Coastal Commission hearing(s) on the project and recommending appropriate speakers for the public hearing(s).

CHANCES FOR SUCCESS

We have learned much in the first month following the filing of appeals on the WWTP project. We have begun a productive dialog with Commission staff, have developed an understanding of Commission staff's concerns with the project, and have created a road map by which to address those concerns. While we cannot pre-judge the outcome of the alternatives analysis, we have every expectation that if the currently proposed site is found to be the environmentally preferred site, it will weigh heavily in the Commission staff recommendation. With regard to the Commission itself, we believe that a favorable staff recommendation coupled with appropriate communications and educational efforts with commissioners will best position MBCSD to obtain a favorable outcome on the project.

Exhibit 6 A-3-MRB-11-001 14 of 363



Morro Bay faces tough decision over sewer plant

Does it try to rebuild old sewer plant, which is in an inundation zone, or pay for a new one?

By David Sneed | dsneed@thetribunenews.com

The Morro Bay sewer plant upgrade is at a crossroads.

In an effort to keep costs down, officials had planned to build a new treatment plant near the location of the old one. The state Coastal Commission does not like that idea, and the plans are on hold as officials review their options.

"We are going to have to look at alternative sites," Morro Bay Mayor Bill Yates said.

At issue is the plant's location on Atascadero Road, just south of Morro Bay High School. It is right next to the beach and lies within a floodplain and tsunami-inundation zone.

The plant is operated by Morro Bay and the Cayucos Sanitary District under a joint powers agreement. Built in 1954, the plant needs to be completely rebuilt and brought up to tertiary standards, the preferred treatment level, at an estimated cost of \$34.3 million.

The plant needs to be replaced because it cannot treat enough sewage to meet state standards and needs a rare waiver to allow it to continue to operate. During high-flow periods, the waiver allows the plant to discharge sewage treated only to the primary level.

Opinions about the best course of action are mixed among the members of the Morro Bay City Council. Councilman Noah Smukler lost faith in the current plans when a 2009 report showed the new treatment plant would be within a 100-year floodplain.

"That was the time to make the shift," he said.

However, moving the treatment plant would be expensive. A new site must be acquired and new pipelines and a lift station installed. The city estimates that for every \$1 million in additional cost, utility rates would go up by \$1.

"Moving the treatment plant will cost tens of millions of dollars more, and residents have been adamant that they want costs kept down," Yates said.

The danger of inundation is not the Coastal Commission's only criticism of the proposed location. Others are protection of coastal views, the presence of archaeological sites and loss of oceanfront property for recreational uses.

Exhibit 6 A-3-MRB-11-001 15 of 363 Morro Bay Planning Commissioner John Diodati thinks the city should cut its losses and find a new site. Costs are already beginning to mount as the city gears up to persuade the Coastal Commission to approve the beachside location, a process that is estimated to take 10 months to complete.

These include paying lobbyist Susan McCabe of Marina Del Rey as much as \$155,000 to shepherd the project through the Coastal Commission process. Plans are also in the works to hire consultants to analyze the issues raised by the commission. This work could cost from \$200,000 to \$350,000.

"In 1954, this was probably a good site, but 50 years later, a community has grown up around it," Diodati said. "We don't want to repeat a bad decision."

Possible alternative locations for the treatment plant include unused portions of the Morro Bay power plant and Chevron's defunct oil terminal midway between Morro Bay and Cayucos.

But these sites pose an additional problem, Yates said. The city would have to use eminent domain condemnation to acquire them.

"Philosophically, I'm against eminent domain," he said. "Does that mean we wouldn't do it? I suppose it's possible."

A third, less popular option is to upgrade the existing plant to full secondary treatment, which is the minimum standard required by state water officials. Smukler believes this would only delay the inevitable and ultimately make the project more expensive.

IF YOU GO

Morro Bay and Cayucos officials will discuss the future of their joint sewer plant upgrade when they meet at 6 p.m. Thursday at the Cayucos Veterans Hall.

Exhibit 6 A-3-MRB-11-001 16 of 363

Madeline Cavalieri

From:Mr Noah Smukler [nsmukler@yahoo.com]Sent:Thursday, April 14, 2011 11:19 AMTo:Madeline Cavalieri; Dan CarlCc:John DiodatiSubject:JPA TONIGHT @ Cayucos Vet's Hall (6-8pm)

Hi Dan and Madeline,

Just wanted to check in with you regarding our meeting tonight and the fairly short staff reports (aside from C2 Flood & Earthquake insurance item)

If you have the time, I would be very interested in your perspective on the staff reports for Item C1 (RFQ for Substantial Issues Study) You'll notice that in our list of items that are required for further study omits a "detailed water reclamation plan".

My philosophy regarding the consultant is below as well as a link to the staff report.

I will not share your comments outside of John Diodati, but it they would be helpful for me to try to ensure we are able to satisfy your expectations.

Thanks again,

Noah

----- Forwarded Message ----From: Mr Noah Smukler <nsmukler@yahoo.com> To: Noah Smukler <nsmukler@yahoo.com> Sent: Thu, April 14, 2011 9:08:35 AM Subject: JPA TONIGHT @ Cayucos Vet's Hall (6-8pm)

Good Morning,

Hope you get a chance to attend the Cayucos/MB JPA Waste Water Treatment Plant meeting tonight: Cayucos (6-8pm) @ Vet's Hall on Pier.

Below is the staff report of the Lobbyist to the Coastal Commission contract at an additional \$155,000!

It will be an interesting meeting for all of us to hear the strategy going forward from our staff and consultants. We are at a very important stage of the project. You know me...I would much rather focus our precious financial resources on direct communication and authentic evaluation of the alternatives instead of a Lobbyist.

I think that by thoughtfully proceeding we can develop a project of which we all can be proud of for generations into the future.

Here's the link to the full staff report/agenda: www.morro-bay.ca.us/archives/54/4_14_11%20JPA%20Agenda%20and%20Staff%20Reports.pdf

> Exhibit 6 A-3-MRB-11-001 17 of 363

7/19/2011

Recent Tribune Article http://www.sanluisobispo.com/2011/04/10/1557684/morro-bay-faces-tough-decision.html#ixzz1JF8g3KLJ

Staff report for Lobbyist pasted below:

APRIL 14, 2011 Cayucos Vet's Hall (6-8pm)

Subject: Discussion of Advocacy Consultant (LOBBYIST)Status Report

Recommendation: By motion, receive and provide direction to staff.

Fiscal Impact:

The fee for McCabe & Company is \$12,500 per month plus expenses. It is estimated that the de novo hearing of the Coastal Commission will be scheduled late this year or early 2012, approximately ten months from now. At the de novo hearing the Coastal Commission will consider issuance of the coastal development permit. Assuming that McCabe & Company services will be provided for a total of twelve months and the outside expenses will be \$5,000, the total fee will be in the range of **\$155,000** (no performance incentive)

Background and Discussion:

On February 10, 2011 the JPA authorized the hiring of McCabe & Company. In accordance with the approved meeting minutes, the motions were:

Cayucos motion, approved 4-1:

"Fones motioned that we hire Ms. McCabe and that in the first month she report to Mayor Yates and President Enns on her potential for success. Her long-term goal is to be an advocate and her first job would be to advise the leadership. Lyon seconded. Motion passed 4-1, Foster opposed. "

Morro Bay motion, approved 4-1:

"Mayor Yates motioned that we hire Ms. McCabe and that in the first month she report to Mayor Yates and President Enns on her potential for success. Her long term goal is to be an advocate and her first job would be to advise the leadership. Borchard seconded. Motion carried 4-1, Smukler opposed."

McCabe & Company's intensity of services will experience peaks and valleys during the appeal process. The first month of services was very busy. McCabe & Company reviewed large quantities of MBCSD documents and the lengthy appeal documents. In addition, McCabe attended the Coastal Commission meeting in Santa Cruz and the follow up meeting with MBCSD staff.

Conversely, there may be less levels of advocacy during the period of time that the supplemental studies are being prepared.

Susan McCabe's report of the first month with her comments on the potential for success are attached to this staff report.

Options:

1. Receive and file the report of McCabe & Company.

Exhibit 6 A-3-MRB-11-001 18 of 363 2. Provide direction as deemed appropriate.

Attachments: McCabe & Company report dated April 3, 2011 (can be viewed online)

> Exhibit 6 A-3-MRB-11-001 19 of 363

7/19/2011

RECEIVED

APR 1 5 2011

Dear California Coastal Commissioners,

6

As you know, many Morro Bay and Cayucos citizens are concerned about the work currently underway, to resolve the issues raised by the CCC in regard to the Morro Bay/'Cayucos wastewater treatment plant (WWTP) project. This letter includes recent local developments and some of residents' concerns regarding the issues.

Apparent Plan for an "End Run" Around the CCC

WWTP project manager Dennis Delzeit's April 1 "Status Report on Upgrade Project as of April 1, 2011" refers to a "Plan B" project, as follows: "Plan B is a possible alternative that could provide full secondary treatment <u>while</u> <u>being exempt from the issuance of a coastal development permit</u>. The MBCSD staff is continuing to explore the potential concepts. Meeting all of the parameters is complex and the solution is not ready for presentation to the JPA at this time." (emphasis added)

Clearly, the reasons for residents' concerns regarding this statement require no explanation. However, it has been suggested that the true nature of the "end run" might not be what it appears to be. It has been suggested that the alleged "Plan B" mentioned by Mr. Delzeit could be imaginary – a subterfuge created to make the statement, "Let us put our plant where we want it, or we will do a different project and you'll only get secondary-treated water instead of tertiary" or, as phrased by one skeptical resident, ""I'm taking the ball and going home and I'm NEVER gonna play wif you again!". The question has been raised, "If there is really is a "Plan B" in the works, why would those involved give themselves away by mentioning it now?"

As has been stated in earlier communications, staff and officials of the City of Morro Bay and the Cayucos Sanitary District appear literally desperate to build the WWTP at their preferred site. Although the reasons are not yet completely clear, one possibility that has been suggested is that there is a great deal of illegal infrastructure under the ground in the area – infrastructure that would be discovered if the site were converted to other uses. It has been suggested that such infrastructure might be connected to the neighboring concrete plant and/or to the desal plant. Another suspicion is that there is some connection with a major planned development in the area.

Alternative WWTP Site Analysis

A key concern of residents is the possibility and, according to some, the likelihood, that the alternative site analysis to be undertaken by the City of Morro Bay and the Cayucos Sanitary District will be nothing more than a "dog and pony show". Many residents suspect that the "study" will deliberately include only unsuitable sites – a strategy to drive the project back to the site favored by staff. One inside source has in fact stated that he was told that this is indeed the City's plan.

One example has already been identified – the Chorro Valley, which Morro Bay City staff members have said will be included in the analysis. They plan to spend taxpayer money evaluating this site and yet, according to the WWTP DEIR, "...moving the plant from its existing location to the Chorro Valley location would not avoid any significant impacts of the proposed project, while potentially creating several new significant environmental impacts." In addition, during the recent rains there was major flooding in the Chorro Valley, and some homes were inundated. The Chorro Valley site lies directly over the Chorro Valley aquifer, which includes many underground streams.

Exhibit 6 A-3-MRB-11-001 20 of 363

CALIFORNIA COASTAL COMMISSION DENTRAL COAST AREA

April 12, 2011

Why would the City and the District even think of including this previously-rejected, flood-prone site in a truly serious study of alternate sites?

In addition, some proposed sites are in agricultural areas. It has been suggested that there might be a plan to "evaluate" them, with the intention of eliminating them afterwards by citing the California Public Resources Code, and policies from the City of Morro Bay's Local Coastal Plan – thus, once again, forcing the project back to the site desired by the City and the District. Following are examples of State law and associated LCP policy that might be used in that way:

California Public Resources Code, Sec. 30242. "All other lands suitable for agricultural use shall not be converted to non-agricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Policy 6.03 All non-prime land within the City of Morro Bay suitable for agricultural use shall not be converted to non-agricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Public Resources Code Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

I have attached to this letter an excerpt from the Morro Bay LCP. It includes additional laws and policies regarding acceptable uses for agricultural land. It seems quite possible that sites on or adjacent to agricultural land **might** be used for the WWTP. However, I believe it is clear that a careful review of State law and LCP policies should be done **before** any taxpayer dollars are spent on in-depth studies of such sites.

Would the City and the District actually spend several hundred thousand dollars on a sham study aimed at achieving their own objectives instead of identifying the best WWTP site? Clearly, we do not have the answer to that question.

However, Morro Bay residents have voiced some serious concerns with past studies done by consultants hired by the City. As reported in the May, 2010 SLO Coast Journal article, "Morro Bay Residents Call for More Oversight of City Staff", in the summer of 2009, a City-hired consultant was reported by residents for conducting an alleged "stream flow interference study" on a stream that had no flow. It was totally dry at the time.

The story reported that, "For about two weeks in late July and early August, 2009, Cleath-Harris Geologists personnel were observed working with Morro Bay City staff in the Ashurst well field, located near the end of Chorro Creek Road. Their observed activities included installation of rented and permanent pipes and the pumping of over 2 million gallons of water from the wells. The water was dumped in a nearby field.

This action was subsequently found to have violated California State Water Resources Control Board (SWRCB) decision 1633..."

An October, 2010 SLO Coast Journal story, "The Strange Saga of Morro Bay's Stream Interference Study", (attached) updated the story, reporting that the same consultant was later retained by the City to make another attempt, but was stopped by the Department of Fish and Game due to failure to obtain the required permits.

Exhibit 6 A-3-MRB-11-001 21 of 363

Lobbyist Hired by Morro Bay and Cayucos

As you know, the City of Morro Bay and the Cayucos Sanitary District have hired a lobbyist, at taxpayer expense. Many residents believe that the sole purpose of the lobbyist is to attempt to convince you to ignore the problems and issues identified by your staff and to OK the currently-planned project at the site favored by the City and the District. Not only does this action appear to show considerable disrespect for the outstanding work done by you and your staff; it stands to cost taxpayers a great deal of money.

In his April, 2011 report, "Discussion of Advocacy Consultant Status Report", WWTP project manager Dennis Delzeit states, "Assuming that McCabe & Company services will be provided for a total of twelve months and the outside expenses will be \$5,000, the total fee will be in the range of \$155,000.

Attached to this letter is a copy of an April 3, 2011 memo sent by the lobbyist to Delzeit. It summarizes the lobbyist's work to date, and lays out suggested next steps to be taken, including:

- "Providing briefings to Coastal Commissioners on a periodic basis, as appropriate, with particular emphasis on the commissioner representing the South Central Coast Region;
- Identifying and mobilizing support for the project, and creating appropriate messages for those entities;
- Developing appropriate oral and written communications (briefing materials) for Commissioners and Staff; and
- Assisting in preparing effective oral and Power Point presentations for the Coastal Commission hearing(s) on the project and recommending appropriate speakers for the public hearing(s)."

The memo's content has raised a number of concerns. One of those was triggered by this comment regarding the alleged views of CCC staff: "Staff recognizes the water quality benefits provided by the project and made clear that their primary concern with the proposed project was lack of a thorough alternatives analysis of other sites that might be preferable....." This statement appears to completely ignore some very critical issues raised in your staff's November 12, 2010 review of the project DEIR, which included the following findings:

Page 2: "Under the current proposal, the new WWTP would produce a large quantity of highly treated wastewater, and the vast majority of it would be disposed of through the ocean outfall. This would not only cause unnecessary impacts on the marine environment, but it would also prevent the 'City and adjacent areas of the County from utilizing this freshwater source to help sustainably meet the region's water supply needs, and it could frustrate Coastal act marine resource policies related to the use of an ocean outfall for disposal in this location."

Page 9: "The availability of water in Morro Bay has improved since the late 1980's and early 1990's due to the arrival of water from the State Water Project in 1997. However, as described in the City's Water Management Plan Status Report of December, 2008, the reliability of water has decreased due to judicial decisions regarding endangered fish species and concerns about global warming. In addition, the use of State Water is extremely energy intensive and has significant environmental impacts far removed from Morro Bay, including impacts on anadromous fish and other species in the Delta. These, and other State water concerns highlight the general issue associated with ensuring that appropriate measures are taken to move towards and ensure a sustainable local water supply."

Exhibit 6 A-3-MRB-11-001 22 of 363

Continued Unwillingness to Take Responsibility for Problems

The City of Morro Bay and the Cayucos Sanitary District still appear to refuse to accept any responsibility for project delays and cost overruns. Project manager Dennis Delzeit's "Status Report on Upgrade Project as of April 1, 2011" states, "The current project is off schedule due to the CCC appeal process." There is no mention of the possibility that it is off course because the City and the District failed to follow recommendations made in 2008 by Coastal Planner Mike Watson, and failed to work proactively and cooperatively with CCC staff during the project stages leading up to the publishing of the DEIR.

Recently, a Morro Bay City employee told a resident that the WWTP was going to cost more than it should "because of the CCC". Again, there was no suggestion by the employee that the City and the District bear the responsibility in light of their own failures.

Interestingly, since the issuance of the CCC's report on the DEIR, there has been no publicly-reported discussion by the City and the District of the fact that PERC Water could deliver a plant for millions less, using the latest technology and producing effluent treated to the highest standards. PERC completed a customized plant design which could reportedly be built on any site, but did not deliver it because the Morro Bay and Cayucos staff refused to sign a non-disclosure agreement and left the PERC option out of the DEIR. Despite the fact that a technically-superior and lower-cost alternative not only exists, but has been fully designed, those in charge of the project appear determined to pursue a far more costly solution that employs outdated technology and fails to deliver any significant water reclamation benefits.

Alleged Propaganda Beginning to Appear in Local News

An April 11 article that appeared in the San Luis Obispo Tribune (attached) appears, according to residents, to be the beginning of a propaganda campaign designed by the lobbyist hired by the City and the District. Among the statements residents find highly questionable are these:

"Moving the treatment plant will cost tens of millions of dollars more, and residents have been adamant that they want costs kept down," Yates said.

"Possible alternative locations for the treatment plant include unused portions of the Morro Bay power plant and Chevron's defunct oil terminal midway between Morro Bay and Cayucos.

But these sites pose an additional problem, Yates said. The city would have to use eminent domain condemnation to acquire them."

Residents point out that the City and the District have provided no sound basis for claims that moving the facility would cost "tens of millions", and that past decisions on the project have indicated little-to-no interest in saving taxpayer money. They also note that there has been no study to determine if there are viable sites the City and the District might purchase, nor has there been a study to determine what the City and District might earn from visitor-serving and other recreational uses for the current beachfront plant site.

This concludes the discussion of some of the recent developments and some of the currently-outstanding resident concerns regarding the Morro Bay/Cayucos WWTP project. Documents containing all of the staff comments referenced above can be found in attachments to the agenda for the Morro Bay/Cayucos April 14, 2011 JPA meeting, available on the City of Morro Bay Web site under the topic, "Agendas & Minutes".

Exhibit 6 A-3-MRB-11-001 23 of 363 Sincerely,

. . . .

Linda Stedjee

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442 Istedjee@charter.net
Excerpts from Morro Bay Local Coastal Plan, Chapter VIII. Coastal Agriculture

California public resources code:

30241 The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas of agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

- (a) By establishing stable boundaries separating urban and rural areas including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.
- (b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses and where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development
- (c) By permitting conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.
- (d) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of prime agricultural lands"

Sec. 30242. "All other lands suitable for agricultural use shall not be converted to non-agricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Sec. 30250(a). "New residential, commercial or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to existing developed areas able to accommodate it, or where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

Notwithstanding the forgoing discussion of agricultural suitability of specific sites, the City has attempted to meet the Coastal Act through the following policies. By necessity the City policies listed in this section address more than the coastal zone area contained within the corporate limits of Morro Bay.

Policy 6.01 The City and the City/County through cooperative review and permitting arrangements, shall maintain the maximum amount of "prime" agricultural land (as defined in Section 30113 of the Coastal Act and as identified through consultation with the U.S.D.A. Soils Conservation Service) in agricultural production to assure the protection of the area's agricultural economy. The City shall join with the county in a cooperative planning management to assure that conflicts shall be minimized between City and County agricultural and urban uses through all of the following:

Exhibit 6 A-3-MRB-11-001 25 of 363 (a) By joint planning efforts to establish stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.

J.

- (b) By limiting conversion of agricultural lands around the periphery of the city to lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses and where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development
- (c) By permitting the conversion of agricultural lands surrounded by urban uses where conversion of the land would be consistent with PRC Section 30250.
- (d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.
- (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (f) By assuring that all diversions of prime agricultural lands, except those conversions approved pursuant to subdivision (B), and all development adjacent to prime agricultural lands shall not diminish productivity of prime agricultural lands.

Policy 6.02 The City shall implement the following standards, or implement the standards in cooperation with the County in a City/County review process:

- (a) Notification for the purpose of comment of any division of land, permit activity, or grading in the Morro and Chorro watershed (as contained in the coastal Zone boundary) to the city for review and recommendations.
- (b) City/County use of "Best Management Practices" to control agricultural practices that would result in sedimentation, contamination of the basins, or misuse of water resources.
- (c) City/County Water Basin management planning in cooperation with other affected agencies.
- (d) Implementation of City Water Management plans activities and facilities where it involves unincorporated lands; and County limitation fo further land development which intensifies use of groundwater resources in the Morro and Chorro Basins until a comprehensive water management plan is adopted by the City and joint groundwater management programs have been formulated.
- (e) Locate new residential, commercial or industrial development within, contiguous with, or in proximity to, existing developed areas able to accommodate it, or where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, provide that land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

Policy 6.03 All non-prime land within the City of Morro Bay suitable for agricultural use shall not be converted to non-agricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Public Resources Code Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Policy 6.04 All non-agricultural development permitted on non-prime agricultural lands shall preserve the maximum amount of lands in agricultural use. In approving any land divisions or non-agricultural use, all of the following findings shall be made by the City:

Exhibit 6 A-3-MRB-11-001 26 of 363

- (1) Continued or renewed agricultural use is not feasible without the proposed division and/or supplemental non-agricultural use
- (2) The proposed division and/or use will allow for and support the continued use of the site as a productive agricultural unit, would contribute to long term agricultural viability andwould preserve agricultural lands.
- (3) The proposed division and/or use will result in no adverse effect upon the continuance or establishment of agricultural uses on the undeveloped portion of the property or on surrounding or nearby properties.
- (4) Buffer areas are provided between agricultural and non-agricultural uses.
- (5) Adequate water supply, sewage disposal and other public services are available to service the proposed development after provision has been made for the continuance of existing agricultural operations and future operations which may require water needs exceeding the present needs.
- (6) The proposed division and/or use will not adversely impact environmentally sensitive areas, scenic resources or the rural character of the site, where applicable. Where new non-agricultural developments are permitted on lands in or previously in agricultural production, sensitive habitats shall be protected, restored and enhanced as a condition of development approval.

Policy 6.05 Where continued agricultural use is not feasible without some supplemental non-agricultural use, priority shall be given to public recreational uses, visitor-serving recreational and visitor-serving commercial use. All division and/or non-agricultural development on non-prime agricultural lands shall require a City-approved development plan showing how the proposed division or development would affect the subject property. In reviewing a proposed development plan and determining the density of permitted use, the City shall require the following conditions:

- (1) Development shall be clustered to retain the maximum amount of agricultural land in agricultural production or available for agricultural use. No more than 2% of the gross acreage of the property shall be converted to non-agricultural uses (including roads and public works). Residential density shall not exceed one dwelling unit per 20 acres. The remaining acreage shall be left in agricultural production and/or open space if agricultural uses are found to be infeasible. Development shall be located close to existing roads and shall be sited to minimize impacts on scenic resources, wildlife habitat and streams and adjacent agricultural operations.
- (2) Prime agricultural land, as defined in Policy 6.01 shall not be removed from production unless consistent with PRC Section 30241.
- (3) Land divisions or development proposals shall include a means of permanently securing the remaining acreage in agricultural use, such as agricultural preserves, open space easements, or granting of development rights. Covenants not to further divide shall also be executed and recorded prior to issuance of development permits.
- (4) The creation of a homeowners' or other organization or the submission of agricultural management plans shall be required to provide for continued agricultural use of agricultural lands and their availability either on a lease or purchase basis. Such organizations or plans shall also provide for the maintenance of water or road systems.
- (5) Agricultural lands supplemented by development shall be accompanied by covenants or other suitable recorded mechanisms to ensure the maintenance of buffers.

Policy 6.06 The City shall participate in the efforts of the Coastal Conservancy or other public or private agencies to implement agricultural enhancement programs. These programs may include but are not limited to:

- (1) Coastal Conservancy purchase of development rights or fee interest in agricultural lands
- (2) Agricultural preservation fees from new development

Exhibit 6 A-3-MRB-11-001 27 of 363

- (3) Transfer of lands to public or non-profit agencies which will lease back for agriculture, retain life estates for current owners, operate "agriculture parks", community farms or experimental agricultural stations.
- (4) Assistance programs (water subsidies, recycling methods, fencing and other buffers, low-cost agricultural loans
- (5) Reduction in City tax assessments based on use and lack of need for urban services and removal of inlieu fees (i.e., Parks and Recreation) where partial site development occurs and agricultural land is maintained.

Policy 6.07 The City's Urban/Reserve and Urban Services Line shall be drawn as follows: include all area within the City limits but exclude the Cabrillo property and the portion of the Williams property which is outside of the approximately 38 acre area adjacent to Highway One and designated for commercial and open area uses.

Policy 6.08 The city shall impement the following revisions to its LUP land use map to preserve and protect the long term productivity of agricultrual lands within and adjacent to the community:

- (1) Designate the Cabrillo property for agricultural land use with a minimum allowable parcel size of 40 acres.
- (2) Permitted use on prime and non-prime agricultural lands shall be agricultural use for cultivation of crops or grazing of livestock and non-residential development accessory to agricultural operations. The following uses shall be conditionally allowed:
 - a. One single family residence
 - b. Farm labor quarters
 - c. Public coastal accessways
 - d. Greenhouse and nurseries

Conditional uses can be permitted on prime lands where it is demonstrated through City findings that no alternative building site exists except on the prime agricultural lands, that the least amount of prime land possible is converted and that use will not conflict with surrounding agricultural lands and uses.

Exhibit 6 A-3-MRB-11-001 28 of 363

From the October, 2010 issue of the SLO Coast Journal

The Strange Saga of Morro Bay's Stream Interference Study

by Kari Olsen

Synopsis: Despite the failure of the 2009 Chorro Valley stream interference test, which was invalidated because the stream was dry at the time of testing, the City of Morro Bay has continued to use the consulting firm that performed the 2009 work. A list of invoices obtained from the Morro Bay City Attorney appears to indicate that although the 2009 test was a failure, the consulting firm was paid, and was paid again, in 2010, to redo the failed test. It appears that thus far, Morro Bay taxpayers have paid \$60,054.81 for a stream interference test project that was originally supposed to cost \$25,000 and that was to have included the writing of a report on the test findings. No report has been produced to date.

Despite the failure of the 2009 Chorro Valley stream interference test, which was invalidated because the stream was dry at the time of testing, the City of Morro Bay has continued to use the consulting firm that performed the 2009 work. A list of invoices obtained from the Morro Bay City Attorney appears to indicate that although the 2009 test was a failure, the consulting firm was paid, and was paid again, in 2010, to redo the failed test.

In June, 2010, the second stream interference test was conducted. This time, creek flow levels were at an acceptable level, but the consultant failed to obtain the necessary permits, arousing the ire of the Department of Fish and Game and local environmental groups.

According to the consultants' proposal, signed by Timothy Cleath and Morro Bay Capital Projects Manager Dylan Wade, the objective of the 2009 study was to obtain permission from the State Water Resources Control Board (SWRB) to use City wells in the Chorro Valley when stream flow downstream of the wells is less than 1.4 cubic feet per second.

The scope of work specified in the proposal document included preparation of a testing plan, installation of two flumes on Chorro Creek, monitoring of flow to determine the impact of well pumping on the creek, removal of the flumes, and preparation of a report "documenting results of stream flow interference testing." The cost to the City was estimated to be about \$25,000.

As reported in the May, 2010 SLO Coast Journal article, "Morro Bay Residents Call for More Oversight of City Staff," in the course of the 2009 test, over two million gallons of water were pumped from Chorro Valley wells and dumped in a field. However, residents questioned how the impact of the well usage on the stream could possibly have been measured, because the stream was completely dry in the area of the test.

As reported in the Journal, the consultants were found to have violated California State Water Resources Control Board (SWRCB) decision 1633, which states in part, "For the protection of fish and wildlife habitat and other public trust resources in Chorro Creek and Morro Bay, beginning when deliveries are available from the State Water Project Permittee shall: Cease all diversions from wells 9, 9A, 10, 10A, 12 and 16 or from any wells constructed and operated as replacement wells for the Ashurst well field, whenever surface flow measured in Chorro Creek downstream of the Ashurst well field is less than 1.4 cubic feet per second."

In June, 2010, the stream flow was at an acceptable level, and a second attempt at the stream interference test was in progress when it was interrupted by a visit from a Department of Fish and Game agent, who reportedly informed those present that the consultants and the City had failed to obtain the necessary permits. At that time, several Morro Bay City officials including Public Services Director Rob Livick, Capital Projects Manager

> Exhibit 6 A-3-MRB-11-001 29 of 363

Dylan Wade, and Morro Bay City Attorney Robert Schultz were observed to be present at the test site. City officials have held that the consultants, not the City, were responsible for obtaining permits. According to Schultz, "the stream flow study was performed by the City's consultant, Cleath Harris Geologists and they were responsible for obtaining all government approvals."

On September 4, 2010, Schultz was asked to provide a copy of the consultants' report on the stream interference study. However, although the report was listed as a deliverable in the consultants' 2009 proposal, Schultz responded that, "The City is not in possession of any 'stream flow study report for the most recent stream flow test conducted at Chorro Creek by Cleath Harris Geologists.' In addition, once such a report is received by the City, the document may be exempt from the CPRA pursuant to Government Code Section 6254 (b) (k)."

Schultz did not explain the government code references, but they refer to documents related to litigation and to evidence. According to a spokesperson for a local environmental group, the Department of Fish and Game is in the process of filing charges against the consultants.

In response to concerns regarding the delay in producing a report, Schultz said, "The study on the stream flow is ongoing and may take a few years to complete and produce a report." A request for an explanation regarding the apparent conflict between this statement and the consultants' original proposal has thus far gone unanswered.

A list of invoices provided by the City indicates that between June 30, 2009 and August 26, 2010 Cleath Harris Geologists have submitted to the City a total of 12 invoices for work related to Chorro Stream flow monitoring and testing. According to the document, all were paid. 2009 invoices were submitted in the amounts of \$920, \$21,145.13, \$2,553.20, and \$676, totaling \$25,294.33. In 2010, there were invoices for \$398.25, \$818.30, \$855.50, \$1,624.50, \$1,124.00, \$6,220.97, \$16,907.86, and \$6,811.10, totaling \$34,760.48. The grand total of the invoices for 2009 and 2010 is \$60,054.81.

Thus it appears that thus far Morro Bay taxpayers have paid \$60,054.81 for a stream interference test project that was originally supposed to cost \$25,000 and that was to have included the writing of a report on the test findings. No report has been produced and now, a report is evidently not expected for "several years," and errors have put the City in danger of being fined by the SWRCB for the 2009 violation.

Exhibit 6 A-3-MRB-11-001 30 of 363

MEMORANDUM

TO:	Dennis Delzeit, Project Manager
FROM:	McCabe & Company (Susan McCabe & Anne Blemker)
RE:	Morro Bay/Cayucos WWTP Coastal Issues Progress Summary
DATE:	April 3, 2011

ACTIVITY SUMMARY

McCabe & Company was retained by the Morro Bay-Cayucos Sanitary District (MBCSD) to provide an analysis of the appeals of the wastewater treatment plant (WWTP) upgrade project filed with the Coastal Commission and to provide a preliminary analysis as to the feasibility of obtaining Coastal Commission approval of the project. To date, we have conducted the following activities:

- Communicated with Coastal Commission Santa Cruz District staff by phone and e-mail and coordinated a meeting with Coastal Commission staff following the Substantial Issue hearing on March 11, 2011;
- Conducted a site visit of the project site and visited several alternative sites discussed in the EIR and identified by appellants;
- Participated in a strategy session with project representatives to discuss process and timing;
- Attended the Coastal Commission's Substantial Issue hearing and participated in a subsequent meeting with Coastal Commission staff to discuss appeal issues, supplemental information requested by Commission staff, and a processing timeframe;
- Participated in MBCSD team debriefing session to discuss the meeting with Coastal Commission staff; and
- Engaged in periodic communications with project manager, Dennis Delzeit, regarding the project and next steps.

Exhibit 6 A-3-MRB-11-001 31 of 363

MEETING WITH COASTAL COMMISSION STAFF

Upon review of the appeals of the WWTP project and related documents and participation in a meeting with Coastal Commission staff, we offer the following observations.

The meeting with Coastal Commission staff (District Director Dan Carl and Staff Analyst Madeline Cavalieri) was both informative and productive. The purpose of the meeting was to develop a clear understanding of the Commission staff's concerns relating to the project and actions MBCSD could take to address those concerns. Staff recognizes the water quality benefits provided by the project and made clear that their primary concern with the proposed project was a lack of a thorough alternatives analysis of other sites that might be preferable to the proposed project location from a Coastal Act perspective. Absent such an analysis, they said they could not conclude that the proposed project location is the best site under the standards of the Coastal Act and the Morro Bay Local Coastal Program (LCP). They offered to coordinate with MBCSD to develop a list of alternative sites to be analyzed, as well as criteria under which the sites should be reviewed. We discussed the other issues raised in the Commission appeals (reclaimed water, plant capacity, hazards, archeology, and public views) and agreed to provide supplemental information requested by Commission staff for their review of the project. We believe that if an alternatives analysis demonstrates that the proposed location for the WWTP is the most appropriate location for the project, Commission staff will be open to recommending approval of the project and that other issues raised in the appeal could be dealt with through conditions to the permit.

PROPOSED NEXT STEPS AND ROLE OF MCCABE & COMPANY

The meeting with Commission staff resulted in a better understanding of the issues raised by the Commission appeals and a road map MBCSD can follow to provide Commission staff with necessary supplemental information by which Commission staff can thoroughly evaluate the proposed WWTP project. Below is a list of activities we would propose that MBCSD undertake with the assistance of McCabe & Company leading up to and through Coastal Commission action on the WWTP project.

 Coordinating with MBCSD's technical consultants to ensure that supplemental studies and data submittals are responsive to Coastal Commission staff concerns and data gaps in the

Exhibit 6 A-3-MRB-11-001 32 of 363 policy areas identified in the Commission appeals (alternatives analysis, water reclamation plan, plant capacity, coastal hazards, archaeological resources, public views);

- Coordinating with Coastal Commission staff to facilitate timely communication exchanges and expeditious review of data submittals;
- Developing and communicating MBCSD's position on the project to Coastal Commissioners, Coastal Commission staff, regulatory agencies, other elected and appointed officials, decision-makers and stakeholders involved with the project;
- Providing briefings to Coastal Commissioners on a periodic basis, as appropriate, with particular emphasis on the commissioner representing the South Central Coast Region;
- Identifying and mobilizing support for the project, and creating appropriate messages for those entities;
- Developing appropriate oral and written communications (briefing materials) for Commissioners and Staff; and
- Assisting in preparing effective oral and Power Point presentations for the Coastal Commission hearing(s) on the project and recommending appropriate speakers for the public hearing(s).

CHANCES FOR SUCCESS

We have learned much in the first month following the filing of appeals on the WWTP project. We have begun a productive dialog with Commission staff, have developed an understanding of Commission staff's concerns with the project, and have created a road map by which to address those concerns. While we cannot pre-judge the outcome of the alternatives analysis, we have every expectation that if the currently proposed site is found to be the environmentally preferred site, it will weigh heavily in the Commission staff recommendation. With regard to the Commission itself, we believe that a favorable staff recommendation coupled with appropriate communications and educational efforts with commissioners will best position MBCSD to obtain a favorable outcome on the project.

Exhibit 6 A-3-MRB-11-001 33 of 363

Morro Bay faces tough decision over sewer plant

Does it try to rebuild old sewer plant, which is in an inundation zone, or pay for a new one?

By David Sneed | dsneed@thetribunenews.com

The Morro Bay sewer plant upgrade is at a crossroads.

In an effort to keep costs down, officials had planned to build a new treatment plant near the location of the old one. The state Coastal Commission does not like that idea, and the plans are on hold as officials review their options.

"We are going to have to look at alternative sites," Morro Bay Mayor Bill Yates said.

At issue is the plant's location on Atascadero Road, just south of Morro Bay High School. It is right next to the beach and lies within a floodplain and tsunami-inundation zone.

The plant is operated by Morro Bay and the Cayucos Sanitary District under a joint powers agreement. Built in 1954, the plant needs to be completely rebuilt and brought up to tertiary standards, the preferred treatment level, at an estimated cost of \$34.3 million.

The plant needs to be replaced because it cannot treat enough sewage to meet state standards and needs a rare waiver to allow it to continue to operate. During high-flow periods, the waiver allows the plant to discharge sewage treated only to the primary level.

Opinions about the best course of action are mixed among the members of the Morro Bay City Council. Councilman Noah Smukler lost faith in the current plans when a 2009 report showed the new treatment plant would be within a 100-year floodplain.

"That was the time to make the shift," he said.

However, moving the treatment plant would be expensive. A new site must be acquired and new pipelines and a lift station installed. The city estimates that for every \$1 million in additional cost, utility rates would go up by \$1.

"Moving the treatment plant will cost tens of millions of dollars more, and residents have been adamant that they want costs kept down," Yates said.

The danger of inundation is not the Coastal Commission's only criticism of the proposed location. Others are protection of coastal views, the presence of archaeological sites and loss of oceanfront property for recreational uses.

Exhibit 6 A-3-MRB-11-001 34 of 363 Morro Bay Planning Commissioner John Diodati thinks the city should cut its losses and find a new site. Costs are already beginning to mount as the city gears up to persuade the Coastal Commission to approve the beachside location, a process that is estimated to take 10 months to complete.

These include paying lobbyist Susan McCabe of Marina Del Rey as much as \$155,000 to shepherd the project through the Coastal Commission process. Plans are also in the works to hire consultants to analyze the issues raised by the commission. This work could cost from \$200,000 to \$350,000.

"In 1954, this was probably a good site, but 50 years later, a community has grown up around it," Diodati said. "We don't want to repeat a bad decision."

Possible alternative locations for the treatment plant include unused portions of the Morro Bay power plant and Chevron's defunct oil terminal midway between Morro Bay and Cayucos.

But these sites pose an additional problem, Yates said. The city would have to use eminent domain condemnation to acquire them.

"Philosophically, I'm against eminent domain," he said. "Does that mean we wouldn't do it? I suppose it's possible."

A third, less popular option is to upgrade the existing plant to full secondary treatment, which is the minimum standard required by state water officials. Smukler believes this would only delay the inevitable and ultimately make the project more expensive.

IF YOU GO

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Morro Bay and Cayucos officials will discuss the future of their joint sewer plant upgrade when they meet at 6 p.m. Thursday at the Cayucos Veterans Hall.

Exhibit 6 A-3-MRB-11-001 35 of 363

Madeline Cavalieri

From:	jgdiodati@co.slo.ca.us
Sent:	Thursday, April 28, 2011 2:31 PM
То:	Dan Carl; Madeline Cavalieri
Cc:	Jonathan Bishop; Mr Noah Smukler
Subject:	Chevron Boundary & Coastal Zone

Attachments: chevron property and coastal zone.pdf; Morro_Bay_city limits_LACFO.pdf

I've attached a map of Chevron's property w/ the coastal zone (blue line is approximate location). I've also included LAFCO's city limits for Morro Bay.

Thanks, John

John Diodati Public Works Department jdiodati@co.slo.ca.us 805.788.2832

[Scanned @co.slo.ca.us]

Exhibit 6 A-3-MRB-11-001 36 of 363

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MAY 0 6 2011

May 2, 2011

Dear Coastal Commissioners,

CALIFORNIA COASTAL COMMISSION CENTRAL COAST AREA

I am writing to provide recently-discovered information and new documentation of concerns and issues regarding the Morro Bay-Cayucos wastewater treatment plant (WWTP) project.

- New information on the state of City of Morro Bay's water supply problem has been found. This, of course, ties to the need for the WWTP to reclaim as much water as possible.
- Several citizens, working independently, have come up with a theory regarding the possible reason for seeminglydesperate attempts by the City and the Cayucos Sanitary District (CSD) to keep the plant in their favored location – on the beach, in a visitor-serving area, in a tsunami zone and a flood zone, and directly over Chumash and Salinan burial and archaeological sites.
- We have learned that the City and the CSD have narrowed the choice of alternative WWTP sites down to three.
 There has been no public involvement in that process.

Morro Bay Water Supply

In their review of the WWTP DEIR, your staff addressed the need for the WWTP to reclaim more water. Many of us believe that this is one of the most critical issues for the project. There is a serious need for our Morro and Chorro basin aquifers to be recharged, as those aquifers supply Morro Bay city wells.

Morro Bay officials and staff have never officially and publicly stated the fact that the City's water supply is precarious. This fact has been kept quiet, and the events following the 2010 State water allotment cutback were probably the first indication that most residents had that their water supply is at risk.

We have just found a 2009 City document that indicates that the City staff knew full well at that time that there was a problem. Three pertinent pages of the document, which indicates that the City must rely on the aquifers to supply a full third of its water supply, are attached to this letter.

The document is a 12/7/2009 City of Morro Bay application for Prop 84 funding for work to be done on the City's desal plant. The "YES" box is checked in answer to the question, "does the affected groundwater provide at least one-third of a community's drinking water supply? (Based on historical, current, or potential supply data.)

In response to this question: "Is treatment or alternate supply necessary to meet maximum day demand for affected PWS? If yes, please explain", it is stated, "The City of Morro Bay receives most of its water supply from the State Water Project which is unavailable for a few weeks a year when it is shut down for inspection and maintenance. The State Water Project is not adequate to meet the City's water demands during severe droughts. Because of these conditions the City must rely on water from the Morro And Chorro groundwater basins and conservation effort yearly to meet water demands."

One of the City's responses is puzzling and appears invalid. In response to the question, "Will the project increase opportunities for groundwater recharge and optimize groundwater supplies", it is stated, "Yes, the project will help optimize the use of the groundwater supply by enhancing the use of contaminated supplies, remediation treatment, and flushing the basin". Resident researchers have been unable to determine just how extracting water from the aquifers, removing contaminants, and distributing it to customers in the City will "increase opportunities for groundwater recharge".

So, it appears that the City of Morro Bay's City staff and officials are, and have for some time been aware of the fact that the City's water supply is not reliable and sustainable. Yet, for reasons unknown, they have made little effort to ensure that the new WWTP will reclaim the maximum amount of water and have taken no steps to ensure that reclaimed water is used for irrigation upstream of the aquifers that supply City wells.

Also attached to this letter is a recent San Luis Tribune article regarding the recent news of a government report on how climate change will further worsen water shortages in the western United States. The report appears to indicate that Morro Bay's water situation will worsen, thus emphasizing the critical need to reclaim the maximum amount of wastewater and to use it for aquifer recharge.

Exhibit 6 A-3-MRB-11-001 37 of 363

Possible Reason Behind City and CSD Determination to Keep WWTP at Inappropriate Site

"Mystery in Morro Bay: Update", an article published in the May 1 issue of the SLO Coast Journal, presents a theory regarding the dogged insistence of the City and the CCC that the WWTP be built in what your staff and many residents consider a completely unsuitable location. The article, attached, discusses a hypothesis that developing a water supply for a huge development proposed for the power plant property is behind it all.

The article states, "Water-Starved California Slows Development, A 2008 New York Times article by Jennifer Steinhauer, discusses impacts of a state law that requires developers to prove they have enough water to support their proposed projects. According to Steinhauer, "The 2001 state water law, which took effect in 2002, requires developers to prove that new projects have a plan for providing at least 20 years' worth of water before local water authorities can sign off on them. With the recent problems, more and more local governments are unable to simply approve projects."

Morro Bay already has a serious water supply problem. How could the developers claim that they could provide water for a development that would bring thousands of people into the city every day? The article says, "According to the residents' theory, reclaimed water could be an essential, and even the major component of the water supply needed to allow the green university development to proceed."

The article goes on to say, "With the Morro Bay-Cayucos WWTP essentially next door, the developers might be able to make a case for being allowed to buy the treated effluent to supplement their water supply. Adding it to the reclaimed water from their own wastewater processing facility, the developers could demonstrate that they had a good supply of water for irrigating green areas and for groundwater recharge to help supply onsite wells.

However, the residents believe, if Morro Bay and Cayucos officials and staff lose their fight to keep their WWTP at their preferred location. it is highly unlikely that the green university would be allowed to build its own wastewater treatment facilities right next door. That facility too would likely be in a tsunami zone.

That would leave the green university dependent on an inland Morro Bay-Cayucos WWTP, possibly a significant distance away, to process its sewage, and to serve as a source of reclaimed water. If they had approved the development, residents might not have a problem with sharing their WWTP, so long as developers paid for the necessary upgrades to the plant and to the collection infrastructure.

However, convincing the residents of water-starved Morro Bay that the developers should be allowed to buy all or most of WWTP's treated effluent might be more difficult – unless they were willing to pay enough to offset the town's costs of acquiring more water from other sources."

Many of us believe that it is critical that reclaimed water from the WWTP be used for irrigation upstream of the City wells, in order to provide a more reliable, less costly water supply for residents, as discussed under the first topic in this letter; NOT to support new development that would further worsen our water situation. The power plant property is, of course, downstream from the wells.

Alternate Site Analysis a "Dog and Pony Show"?

In my April 12 letter to you, I stated, "A key concern of residents is the possibility and, according to some, the likelihood, that the alternative site analysis to be undertaken by the City of Morro Bay and the Cayucos Sanitary District will be nothing more than a "dog and pony show". Many residents suspect that the "study" will deliberately include only unsuitable sites – a strategy to drive the project back to the site favored by staff. One inside source has in fact stated that he was told that this is indeed the City's plan."

We have learned that the City has now narrowed down its target sites to three. At the most recent Joint Powers Agreement (JPA) meeting, which includes City of Morro Bay and CSD officials, WWTP project manager Dennis Delzeit stated that ten alternative sites had been reviewed, and that the field had been narrowed down to three candidates. He stated, "We have a fairly high level of confidence in the present site."

It seems quite reasonable that they do have confidence in the current site if, as some residents suspect, they "stacked the deck" by ensuring that the other two sites they chose to include were even less feasible than the one they prefer. Unless

Exhibit 6 A-3-MRB-11-001 38 of 363 your staff members were fully involved in the site review and selection process, that scenario appears to be a distinct possibility. There was no public involvement in the process.

Concerned residents will submit a Public Records Act request to obtain more information on the original ten sites considered, and the process through which that group of sites was narrowed down to three. That information will be shared with you once it is received.

Sincerely,

Linda Stedjee

2848 Birch Avenue Morro Bay, CA 93442 Istedjee@charter.net

cc: Madeline Cavalieri, Coastal Planner

Exhibit 6 A-3-MRB-11-001 39 of 363 State of California –Division of Drinking -vater and Environmental Management California Department of Public Health

		Yes	No
a.	Does the project prevent or reduce the contamination of groundwater? If yes, please explain:		
b.	Is the project considered "Ready to Proceed"? If yes, explain how the project is "Ready to Proceed":		
C.	Does the project protect public health and will address a contaminant with a primary MCL? If yes, please explain:		
d.	Does the affected groundwater provide at least one-third of a community's drinking water supply? (Based on historical, current, or potential supply data.) If yes, please provide data to support this response:		
e.	Does the project address an anthropogenic source of contamination? If yes, please identify the contaminants and the source of the contamination:		

PLEASE NOTE: If you answered "NO" to any of the above questions, your project does not meet the Proposition 84 Section 75025 Eligibility Criteria.

 Will the proposed project replace existing facilities? <u>NO</u> If yes, please respond to the following questions. If no, proceed to Eligibility Criteria #3.

Projects to replace existing treatment facilities are eligible if one or more of the following conditions are met:

	Yes	No
 Does the existing treatment capacity need to be increased? (subject to the noted sizing criteria) 		
b. Is the existing treatment facility nearing or at the end of its useful life?		
c. Will the replacement of an existing treatment facility reduce operation and maintenance costs for that facility?		
d. Will the replacement of an existing treatment facility increase contaminant removal efficiency through improved technology?		

If you answered "Yes" to any of the above questions, please explain your answer:

Proposition 84 Section 75025 Supplemental Information Form - 12/7/2009 State of California –Division of Drinking vvater and Environmental Management California Department of Public Health

III. RANKING CRITERIA

As appropriate please attach supporting documentation to your application to just your response.

 a) Identify the contaminant(s) of concern, and indicate with an "X" what its impact is on the PWS source:

	Impact on Drinking Water Source					
Contaminant	Contaminant has reached PWS source and has been detected > MCL	Contaminant has reached PWS source and has been detected < MCL	Contaminant has not reached PWS source but is within 2 year TOT	Contaminant has not reached PWS source bu is within 2-10 TOT		
Nitrate	X					

- b) Please provide the treatment process(es) and/or other methods to address the above contaminant(s): <u>Reverse Osmosis Treatment of both brackish and seawater</u>
- Provide the contaminant plume characteristics, and provide documents or data supporting this (Is the plume migrating towards a PWS source? Is the contaminant source being replenished? Is the contaminant plume stable?):
 See attached Morro Basin Nitrate Study
- 3. Is treatment or alternate supply necessary to meet maximum day demand for affected PWS? If yes, please explain: <u>The City of Morro Bay receives most of its water vsupply from the State Water Project which is unavailable a few weeks a year when it is shut down for inspection and maintenance. The State Water Project is not adequate to meet the City's water demands during severe droughts. Because of these conditions the City must rely on water from the Morro and Chorro groundwater basins and conservation efforts yearly to meet water demands.</u>
- 4. What is the population served by PWS sources that are within the 10 year Time of Travel (TOT) for the contaminant(s)? (Provide a map showing the 10 year TOT): 10,436

Proposition 84 Section 75025 Supplemental Information Form - 12/7/2009 Page 3

State of California –Division of Drinking -vater and Environmental Management California Department of Public Health

- 5. Will the local water supply reliability be enhanced if project is fully implemented? If yes, please explain: <u>By treating groundwater in the Morro Basin at the City of Morro Bay's Reverse Osmosis Treatment Plant, nitrate contaminates will be removed from the basin. Incoming amounts of nitrates will be reduced with continued nitrate contamination reduction efforts in place in the upper reaches of the watershed. These two efforts combine to reduce nitrate concentrations in the basin and also reduce the impact of contamination on the local supply.</u>
- 6. Will the project increase opportunities for groundwater recharge and optimize groundwater supplies? If yes, please explain: <u>Yes, the project will help optimize the use of the groundwater supply by enhancing the use of contaminated supplies, remediation treatment, and flushing the basin.</u>
- 7. Will the project implemented pursuant to a comprehensive basinwide groundwater quality management and remediation plan, or is it necessary to develop a comprehensive groundwater plan? If yes, please explain: <u>A comprehensive plan has not been developed but the project does remediate the key contaminant of concern in the Morro Basin.</u>
- Does the affected groundwater provide a local supply that, if contaminated, will require the importation of additional water from the Sacramento-San Joaquin Delta or the Colorado River? If yes, please explain: <u>Yes, if the contaminated source of water is</u> not treated the City will have to rely more heavily on imported water from the State Water Project.
- Does the project serve an economically disadvantaged community? (Area served has an MHI that is ≤ 80% of the Statewide MHI) If yes, please provide a water service area map for the affected area: Yes, map and census information attached.
- 10. Does the project have the potential to leverage funds? If "YES", please indicate the potential amount and source of the funds to be leveraged?: <u>Yes, the City will</u> provide a local match leveraging the State's and City's investment.
- Does the project address the contamination at a site on the list maintained by the Department of Toxic Substances Control pursuant to Health & Safety Code Section 25356 or is the site listed on the federal CERCLA National Priorities List? If yes, please indicate which list it is on: <u>No</u>

Proposition 84 Section 75025 Supplemental Information Form - 12/7/2009 San Luis Obispo Tribune article

- 31

Posted: 4:05 pm Monday, Apr. 25, 2011

Report: Climate change worsens Western water woes

http://www.sanluisobispo.com/2011/04/25/1575682/report-climate-change-toworse.html#ixz21KdUTAboI

By MATTHEW DALY | Associated Press

Climate change is likely to diminish already scarce water supplies in the Western United States, exacerbating problems for millions of water users in the West, according to a new government report.

A report released Monday by the Interior Department said annual flows in three prominent river basins - the Colorado, Rio Grande and San Joaquin - could decline by as much 8 percent to 14 percent over the next four decades. The three rivers provide water to eight states, from Wyoming to Texas and California, as well as to parts of Mexico.

The declining water supply comes as the West and Southwest, already among the fastestgrowing parts of the country, continue to gain population.

Interior Secretary Ken Salazar called water the region's "lifeblood" and said small changes in snowpack and rainfall levels could have a major effect on tens of millions of people.

The report will help officials understand the long-term effects of climate change on Western water supplies, Salazar said, and will be the foundation for efforts to develop strategies for sustainable water resource management.

The report notes that projected changes in temperature and precipitation are likely to alter the timing and quantity of stream flows in all Western river basins, with increased flooding possible in the winter due to early snowmelt and water shortages in the summer due to reductions in spring and summer runoffs. Changes in climate could affect water supplies to a range of users, from farms and cities to hydropower plants, fish, wildlife and recreation, the report said.

Western states are growing faster than the rest of the country, with some of the fastest growth occurring in the driest areas, such as Nevada, Arizona and Texas.

Exhibit 6 A-3-MRB-11-001 43 of 363 "Impacts to water are on the leading edge of global climate change," said Mike Connor, commissioner of the Bureau of Reclamation, an Interior Department agency that provides water to more than 31 million people in 17 Western states and power to 3.5 million homes.

x

The report "affirms the urgency of the planning we are engaged in," Connor said at a news conference Monday. "We need to take actions now to plan" for changes that are likely to occur over the next several decades.

The report addresses the expected impact of climate change on eight major rivers basins in the central and Western United States. Besides the Colorado, Rio Grande and San Joaquin, the report also looks at the Columbia, Klamath and Sacramento rivers on the West Coast; the Missouri River Basin in the Northwest and Great Plains; and the Truckee River Basin in California and Nevada.

All eight basins should see an increase in temperature of about 5 to 7 degrees Fahrenheit by the end of the century, the report says. Four basins will see an increase in overall precipitation by 2050: the Upper Colorado, Columbia, Missouri and Sacramento, while four will see a decrease: the Lower Colorado, Rio Grande, San Joaquin and Truckee.

Reductions in spring and summer runoffs could lead to a drop in water supply in 6 of the 8 basins, the report said.

Due to early snowmelt and relatively higher winter rains from warmer conditions, all but the Colorado basin could become more vulnerable to floods, the report said.

Aiguo Dai, a climate scientist with the National Center for Atmospheric Research in Boulder, Colo., said the report echoes predictions he and other researchers have made that climate change would reduce stream flow rates in Western U.S. rivers. But he said computer models used to assess global trends would not be helpful for small river basins such as the Klamath or Upper Rio Grande.

Even regional models that take local topography into account "still contain large uncertainties," Dai said.

Sen. Jeff Bingaman, D-N.M., said the report did "a solid job" cataloguing Interior's efforts to respond to climate change. Bingaman, chairman of the Senate Energy and Natural Resources Committee, sponsored a 2009 law that aims to improve water management in the West and increase analysis of water-related data. The report released Monday was prepared in response to the Secure Water Act.

"Faced with forecasts of decreased stream flows and increased temperatures, it's more important than ever for communities to actively plan for changing conditions," Bingaman said. "In arid environments like New Mexico, every drop counts, and conservation and efficient water use are essential. Having tools available to accurately monitor existing water supplies, and to accurately predict future scenarios, can provide more certainty to water users and help decrease tensions."

> Exhibit 6 A-3-MRB-11-001 44 of 363

Mystery in Morro Bay: Update



Commentary

<u>Synopsis</u>: The November, 2010, Journal article <u>Mystery in Morro Bay</u> invited readers to explore unanswered questions that had arisen in connection with a proposed project that would completely change the face of Morro Bay—a "green university" to be built on power plant property. Morro Bay residents have offered a theory on a possible connection between the proposed development and the seemingly-inexplicable push by local government to keep the wastewater treatment plant (WWTP) at its current location. The heart of the matter, the residents theorize, may be the water supply needed to allow the development project to proceed.

In 2009, <u>Westpac Energy Group</u>, now known as <u>Ecobaun</u>, came to Morro Bay with detailed plans for a huge development project centered on power plant property. The firm has been alleged to have ties to another Westpac—one of Australia and New Zealand's largest commercial and institutional banks. That firm owns Westpac Investments LLC, which is based in San Luis Obispo

The development, a green university, would, according to its would-be developers, be dedicated to "research, innovation and education for regional and global power sources." The plans presented were detailed and extensive, and it was noted that thousands of people would work at and visit the completed facilities every day.

Since Mystery in Morro Bay was published, Ecobaun has removed the information cited by the article from its website. However, the project is still listed on the firm's Projects page and is described in the <u>"vision book"</u> that remains online. Page 12 of the book shows an aerial view of the proposed project and clearly illustrates its size.

Given the number of people that the development would serve, a large, reliable water supply would be necessary. Where, the residents ask, would that come from?

Development, Water Supplies, and California Law

<u>Water-Starved California Slows Development</u>, A 2008 New York Times article by Jennifer Steinhauer, discusses impacts of a state law that requires developers to prove they have enough water to support their proposed projects. According to Steinhauer, "The 2001 state water law, which took effect in 2002, requires developers to prove that new projects have a plan for providing at least 20 years' worth of water before local water authorities can sign off on them. With the recent problems, more and more local governments are unable to simply approve projects."

Morro Bay is known to have a serious water supply problem. As discussed in the March, 2010 Journal article, <u>Morro Bay's Precarious Water Supply</u>, "The recently-announced state water cutbacks came as a wakeup call to Morro Bay residents, many of whom had probably never suspected that their water supply was at risk."

State water is not guaranteed and could be cut back at any time. Problems with Morro Bay city wells and limitations imposed on the amount of water that can be taken from the aquifers have strained the city's ability to supply enough water for the current number of residents and visitors. Desalination can and is used when necessary, but the process is very expensive.

So, how could Ecobaun prove the availability of a 20-year water supply sufficient to meet the needs of the thousands of people who would work at and visit the green university every day? How could they provide that water at a reasonable cost?

Exhibit 6 A-3-MRB-11-001 45 of 363 There are underground streams that run under the power plant property. Recently Morro Bay approved a permit for <u>Morro Bay Mutual Water</u>, a PG&E affiliate, to drill a new well on that property. The stated purpose was to replace an existing well.

The California Coastal Commission (CCC) intervened and stopped that project, pointing out the fact that private wells are forbidden within city limits. If there were plans to use the new well to help supply some of the water needed for development of the green university, those plans appear to have been stymied.

What other sources might the developer access? According to the residents' theory, the answer may be that developers plan to use a significant amount of reclaimed water from wastewater treatment facilities to meet the state's 20-year-water-supply requirement.

The Morro Bay/Cayucos WWTP—Location, Location, Location

According to the residents' theory, reclaimed water could be an essential, and even the major component of the water supply needed to allow the green university development to proceed. The residents assert that the developers may plan to use reclaimed wastewater from two sources---onsite treatment facilities and the Morro Bay-Cayucos WWTP.

Of course, the residents note, the water to be reclaimed at onsite facilities would have to come from somewhere, perhaps a desalination plant. Although desalination is expensive, recycling the water would hold costs down.

With the Morro Bay-Cayucos WWTP essentially next door, the developers might be able to make a case for being allowed to buy the treated effluent to supplement their water supply. Adding it to the reclaimed water from their own wastewater processing facility, the developers could demonstrate that they had a good supply of water for irrigating green areas and for groundwater recharge to help supply onsite wells.

However, the residents believe, if Morro Bay and Cayucos officials and staff lose their fight to keep their WWTP at their preferred location. it is highly unlikely that the green university would be allowed to build its own wastewater treatment facilities right next door. That facility too would likely be in a tsunami zone.

That would leave the green university dependent on an inland Morro Bay-Cayucos WWTP, possibly a significant distance away, to process its sewage, and to serve as a source of reclaimed water. If they had approved the development, residents might not have a problem with sharing their WWTP, so long as developers paid for the necessary upgrades to the plant and to the collection infrastructure.

However, convincing the residents of water-starved Morro Bay that the developers should be allowed to buy all or most of WWTP's treated effluent might be more difficult – unless they were willing to pay enough to offset the town's costs of acquiring more water from other sources.

Water Supply and Cost Impacts on Morro Bay Residents

Residents and local farmers have long recommended that the treated water from the new WWTP be sold to local farmers for use in irrigating their crops. If that were done, the aquifers that supply Morro Bay city wells would be recharged upstream of those wells, and the current residents of Morro Bay would benefit. Residents' dependence on unreliable and expensive State water would be reduced; the wells would provide a more reliable, sustainable water supply at lower cost.

However, if the treated water were sold to the "green university." any aquifer recharging that occurred would be downstream of the City wells, and arguably the only ones who would benefit in terms of water supply and water costs would be the green university developers and the users of their facilities.

It appears unlikely that Morro Bay residents would allow reclaimed water from a new inland plant to be transported back to the coastline, and dedicated to supporting a huge development that they have not Exhibit 6

A-3-MRB-11-001 46 of 363 approved, or even been asked to approve-particularly when that water could be put to another use that might help ensure a less costly, more reliable water supply for those residents.

The August, 2010 Journal article, <u>Growth Through Development</u>, states the viewpoint that, "Insufficientlycontrolled development has left Morro Bay and neighboring communities with depleted public water supplies, crumbling infrastructure, and reduced public services. It has been shown that despite myths perpetuated by developers, revenues generated by development are less than the costs of servicing it."

The point might be made that selling the treated water from the new WWTP to developers, rather than using it recharge the aquifers that supply City wells would essentially amount to another example of residents subsidizing development.

City and CSD Insistence on Keeping the WWTP at the Current Site

Are some city officials and/or staff working with green university developers to help ensure a supply of reclaimed water for the facility? There is no evidence to indicate that is the case.

Their behavior is, however, something of a mystery to residents who question the official reasons given for the dogged insistence on keeping the plant at a site that lies in a tsunami zone and flood plain, in a visitor-serving area, and over Chumash and Salinan burial and archaeological sites. The WWTP location favored by the city and the CSD has been essentially rejected by the CCC, which recently took over the permitting process.

After the CCC's action, one of the first reactions of the city and the CSD was to hire a lobbyist to attempt to sway the opinion of the Coastal Commission. A second was to state that they are considering going to a "Plan <u>B" project</u> that would not require a coastal development permit, thus cutting the CCC out of the equation.

Whether the city and the CSD would be allowed to do that is questionable. However, some residents believe the fact that they have suggested it signals their determination and, as one resident put it, "desperation." to keep the WWTP in their preferred location.

That determination also surfaced in an April 11 Tribune article, <u>Morro Bay Faces Tough Decision Over Sewer</u> <u>Plant</u>. In that article, Morro Bay Mayor Bill Yates is quoted as saying, "Moving the treatment plant will cost tens of millions of dollars more, and residents have been adamant that they want costs kept down." Residents have pointed out that there are no reliable studies of any kind that support such a statement, and that the conversion of the current beachfront site to low-impact visitor-serving uses could generate a considerable amount of money to offset any costs associated with moving the plant.

Residents also point out that the mayor's alleged concern regarding costs seems rather sudden, and suggest that previous actions taken by the city and the CSD do not seem to indicate similar concerns. Those actions include:

- Failure to work cooperatively with the CCC before any significant work was done on the WWTP
 project, so that to ensure that CCC concerns would be addressed and rework would be
 minimized.
- Awarding of the design contract to the highest, not the lowest, bidder among five qualified firms.
- Failure to develop and gain approval of the project's environmental impact report (EIR) before beginning design work. (The DEIR, which cost \$377,000, will have to be redone.)
- Failure to give serious consideration to PERC Water, which said it could build a better plant for much less, at a guaranteed cost, and essentially shutting out PERC water by refusing to sign non-disclosure agreements to provide basic protection for PERC's intellectual property rights, and by failing to include the PERC option in the DEIR.

Many Questions Remain Unanswered

Exhibit 6 A-3-MRB-11-001 47 of 363 What may be behind the actions of Morro Bay and Cayucos officials and staff is known only to those involved. Residents can only theorize the motives behind the campaign to keep the WWTP in a location that seems, to many residents and to the CCC, to be completely unsuitable.

In addition to the residents' theory discussed here, residents had suggested that there may be illegal infrastructure under the ground that local officials and staff do not want discovered. There is no evidence to prove that either theory is correct—or incorrect.

Whether or not there is any connection between the actions of local government and the proposed green university development remains a subject of speculation. However, the theory brought forward by residents in response to *Mystery in Morro Bay* provides some interesting food for thought.

Exhibit 6 A-3-MRB-11-001 48 of 363

Madeline Cavalieri

From:Mr Noah Smukler [nsmukler@yahoo.com]Sent:Thursday, May 12, 2011 4:33 PMTo:Madeline CavalieriSubject:Re: MB/Cayucos JPA mtg tonightthanks for the feedback Madeline!

From: Madeline Cavalieri <mcavalieri@coastal.ca.gov> To: Mr Noah Smukler <nsmukler@yahoo.com>; Dan Carl <dcarl@coastal.ca.gov> Sent: Thu, May 12, 2011 12:08:43 PM Subject: RE: MB/Cayucos JPA mtg tonight

Hi Noah,

I don't have time today to review this staff report in detail, but I think you raise important issues, and no we haven't talked with City staff about the number of alternative sites. (Actually, I've only corresponded with Dennis once since our March 11 meeting – I sent him information about how we generally like to see the sea level rise/erosion analysis done).

I'm not familiar with local government RFQ process, but it seems short-sighted to have them evaluate a limited number of alternative sites (with regard to both the 10 rough and the 3 fine). What if there are more than three sites that merit a thorough review? As we discussed before, the number of sites evaluated should be based on the analysis itself, not just on a number that someone decides is reasonable. (But again, because I'm not familiar with the process, I'm not sure how much flexibility there would be to increase/decrease the number of sites as the analysis is being performed.)

Also, just so you know, I would be happy to talk with City staff/consultants anytime they have questions or concerns about this project.

Madeline

Madeline Cavalieri Coastal Planner California Coastal Commission 725 Front Street, Suite 300 Santa Cruz, CA 95060 (831) 427-4863 mcavalieri@coastal.ca.gov www.coastal.ca.gov

From: Mr Noah Smukler [mailto:nsmukler@yahoo.com] Sent: Thursday, May 12, 2011 11:36 AM To: Dan Carl; Madeline Cavalieri Subject: MB/Cayucos JPA mtg tonight

Hi there Dan & Madeline,

Our meeting tonight is a very important one as item C-1 is the review of the Draft Scope for the Alternatives analysis and selection of the consultant to perform the work. Here are a couple of my concerns:

Agenda/Staff Reports/Attachments http://www.morro-bay.ca.us/archives/54/5_12_11%20JPA%20Agenda%20and%

Exhibit 6 A-3-MRB-11-001 49 of 363 20Staff%20Reports.pdf

Page 31 - McCabe says CCC staff will help coordinate alt anaylsis. Did JPA staff coordinate with CCC staff? If not, are we setting ourselves up to go back to the drawing board? ie, did CCC staff say 10 rough and 3 fine screening sites are OK?

Page 32 "Chances for Success" - This is very interesting. McCabe is silent on what happens if an alt site is found to be better. Will she lobby for it? She is very clear she will lobby for the proposed site if it is superior, but doesn't say what happens if it isn't. Since she is at the meeting, I will call her on this and see what she says.

RFQ scope of services (Attachment 1):

page 2 of 5 -

1(b) - Why is this already being limited? Did CCC staff approve this approach? Are the public workshops to present their findings (reveal the 10 sites) or to have the community help develop the 10 sites? I thought the CCC was very clear they wanted community involvement. This RFQ doesn't appear to reflect this.

Dudek - Key staff is ex ccc staff. (April Winecki) Dan, do you know her?

Draft scope of work "(pg 39) Why was "Comply with Settlement agreement...full operation by March 31, 2014" still a criteria for a site? Isn't this date busted?????? This isn't a coastal act issue?

Draft scope of work (pg 40) - Why are 8 of the 10 sites already picked? Shouldn't some, like Whale ROck, be kicked out and let the comunity help pick a site? That is a waste of a site!

Draft scope of work (pg 40) Logistics - "Can the proposed project be implemented in the required timeframe considering legal and institutional issues" - This is tipping the scale for the proposed site and the CCC will see right through this. For example:

- Proximity to existing collection system/facilities - How does this impact coastal resources? This is purposely there to favor the existing site.

- Land owner rights?!?!?!? - What? Eminent Domain makes this a non-point. Again, this is going to hurt the review and the CCC will see right through it. This issue has nothing to do with the coastal act issues the city is facing!!!!

- implemented in required time frame? Rushing a project is what got the city in this mess in the first place. Do they want to repeat that mistake? Plus what is the new timeframe? Wasn't it requested to go until the CCC was over? Again, this should be a wash.

7/19/2011

RECEIVED

JUN 0 6 2011

CALIFORNIA

CENTRAL COAST AREA

Dear California Coastal Commissioners,

June 02, 2011 COASTAL COMMISSION

I am writing to provide you with some information on three issues:

- 1. Alternative Morro Bay-Cayucos WWTP site analysis
- 2. Issues raised in a May 26 News Article on WWTP project waste and management issues
- 3. Article on Morro Bay dredging issues pertinent to June 16 meeting permit application No. 3-10-056 (City of Morro Bay (State Park Marina)

1. Alternative Morro Bay-Cayucos WWTP site analysis

In a recent letter to you, I reported that residents had learned that alternative sites had been narrowed down from ten to three without citizen participation. This information was obtained from a local news article.

When asked to provide documentation on the process used to choose the three sites, City of Morro Bay staff denied that any such action had taken place, and stated that the numbers "ten" and "three" were given only for budgeting purposes. I was directed to a February, 2011 City web page that contains the following:

"A rough screening analysis will be conducted to identify feasible and appropriate project alternatives to carry forward into a fine screening analysis. The site alternatives for the rough screening analysis will be preliminarily identified based on the proposed project documents that describe the current WWTP and Chorro Valley sites, and the Surfrider Foundation appeals letter, which identifies six additional potential sites. These site alternatives will be supplemented by additional sites to be determined based on a public workshop and siting criteria to be developed by Consultant, MBCSD staff, and the project manager. The site alternatives will include at a minimum:

- 1. Current WWTP site (proposed project)
- 2. Chorro Valley site ? EIR Alternative 3 (Cannon Associates, 2007)
- 3. Surfrider Foundation site ? Whale Rock site
- 4. Surfrider Foundation site ? Highway 41 Corridor Madonna property
- 5. Surfrider Foundation site ? Chevron Oil Facility
- 6. Surfrider Foundation site ? Hayashi or Giannini properties
- 7. Surfrider Foundation site ? Power plant site
- 8. Surfrider Foundation site ? PG&E/City property
- 9. Additional site that meets established siting criteria
- 10. Additional site that meets established siting criteria."

The City staff members who provided the link state that no narrowing down of the choices has taken place since February. Who is correct (the news reporter or the City staff) and what, if anything has taken place behind closed doors is unknown. However, it appears that, at for the present, some semblance of the correct process is to be followed.

One concern is the inclusion of the Chorro Valley site in the list. As noted in a prior letter I sent to you, there are resident concerns about this because it appears that the City and the Cayucos CSD "plan to spend taxpayer money evaluating this site and yet, according to the WWTP DEIR, "...moving the plant from its existing location to the Chorro Valley location would not avoid any significant impacts of the proposed project, while potentially creating several new significant environmental impacts."

2. Issues raised in a May 26 news article on WWTP project waste and management issues

"Consulting Waste" (attached), an article that appeared in the May 26 issue of the New Times (a local print and online news source), slammed the project's management for its use of consultants on the project, and pointed out something that many residents have complained about for a long time: The same consultants seem to pop up

> Exhibit 6 A-3-MRB-11-001 51 of 363

over and over and make a great deal of money at taxpayer expense, but appear to do little that is of any use in terms of producing successful, cost-effective projects.

The tendency of local governments to hire these consultants has become a major issue for many residents, who have been seriously questioning the capability of Morro Bay and Cayucos officials and staff to run the WWTP project. The caption on one photo in the "Consulting Waste" article seems to say it all. The photo is of the Morro Bay City Council and the Cayucos Sanitary District Board. It is titled, "The Bureaucrat Brady Bunch."

Reasons why these consultant issues continue to plague San Luis Obispo County residents are open to speculation. However, some residents believe that a second article (attached), "Allegations, Accusations and Denials – MWH and its Customers in New Orleans, Cape Coral, Los Osos, and Morro Bay", might hold a clue to at least a part of the problem. I cannot say whether or not that is true, but it is a perception held by some locals here in Morro Bay.

Article on Morro Bay dredging issues – pertinent to June 16 meeting permit application No. 3-10-056 (City of Morro Bay (State Park Marina)

This article (attached) discusses weaknesses in testing protocols used by the U.S. Army Corps of Engineers – weaknesses that result in the likelihood that sediments dredged from our harbors contain a lot more dangerous contaminants than tests reveal. The investigation behind the article was prompted by the fact that large amounts of nonylphenols have been found in gobi fish in the Morro Bay vicinity; yet this contaminant was not identified in the sediments tested by the USACE. The reason: USACE tests do not include this and many more "emerging contaminants". The issues raised increase concerns regarding the disposal of the dredged materials and, of course, the fact that the contamination of our ocean waters may be far worse than indicated by current testing protocols.

Sincerely,

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442 Istedjee@charter.net

cc: Madeline Cavalieri

Exhibit 6 A-3-MRB-11-001 52 of 363

FROM MAY 26 FSSUE OF "NEW TIMES

Consulting waste

Morro Bay and Cayucos' sewer project is in trouble—but they're paying consultants to help move some version of it along

BY COLIN RIGLEY



THAT'LL BE \$37,500

For three months of work as a contracted lobbyist, Susan McCabe will have probably made \$37,500 before her contract is suspended. After that, she'll make \$650 per hour; her assistant will make another \$325 per hour. PHOTO BY STEVE E. MILLER To comprehend how the new Morro Bay and Cayucos sewage treatment plant is being designed, you need to know what happened on May 12.

On that day, speaking to a 10-person panel comprising the Morro Bay City Council and Cayucos Sanitary District Board of Directors—otherwise known as the Joint Powers Authority, or JPA— Project Manager Dennis Delzeit explained why they should suspend, but not really suspend, a \$12,500-per-month lobbying contract. He advised JPA members to keep their lobbyist just a little longer so she could help draft a contract needed for the next stage of the project. Afterward, this lobbyist would be kept on retainer, billing her usual rate of \$650 per hour—\$325 per hour for her assistant—just when her services are needed.

And on an 8-2 vote, the JPA members did it, allowing their project manager to suspend a contract and transition an already controversial lobbyist to an unfettered land-use consultant with an hourty bill.

In effect, they let a consultant hire a consultant to help hire another consultant in order to bandage the work of past consultants.

In doing so, project officials for the Morro Bay/Cayucos treatment plant shifted from referring to Susan McCabe, the aforementioned lobbyist, from hired guide through state regulators to an asneeded consultant. By the time her contract expires, McCabe will have pulled in \$37,500 (not counting travel and other expenses, estimated at about \$800 so far) for three months of her services. In that time, she's produced precisely six pages for the public record and made one public appearance. That was the May 12 meeting.

"Here she is," Morro Bay Mayor Bill Yates said, introducing McCabe. "She's a real human."

To put things in perspective, at McCabe's going rate, you would have made about \$55 for what you've read so far.

"Yeah, McCabe has to peddle the fiction that applicants are doorned without her skillful service," said one employee with the Coastal Commission.

The display left at least two JPA members dumbfounded.

"I think this is unfortunate that we were presented [with] this as a suspension of a contract, and it's very clearly not a suspension of a contract," said Morro Bay Councilman Noah Smukler, who voted against the proposal alongside Cayucos Director Mike Foster.

Yates even joked with Delzeit.

"I'm going with some faith here," Yates said laughingly before voting to keep McCabe on without a contract. "Don't screw this up."

Translation: Don't screw us.

But McCabe's reputation in Morro Bay and Cayucos was already shaky. Residents blasted project officials on Feb. 10 for considering hiring her in the first place. Despite requests, she made no public appearances until May 12, when her work with the district was supposed to have been put on hold.

Exhibit 6 A-3-MRB-11-001 53 of 363 She was hired to provide Morro Bay and Cayucos access to the California Coastal Commission, the monolithic state agency with authority over coastal projects ranging from residential fences to community-wide infrastructure projects.

Cayucos Sanitary District Counsel Tim Carmel explained at the Feb. 10 meeting that a lobbyist can pitch community projects to commissioners and staffers by providing meals and outlings.

"It's a necessary evil," he said.

It was later recorded in the meeting minutes this way: "Carmel explained that lobbyists could get you in the door of the Coastal Commission and get your side heard. The lobbyist generally has a prior working relationship with the Coastal Commission and staff and can get our position on the project across to them to balance the scales against the appeals. They're [sic] rates are high due to the nature of their work i.e. late hours, dinners etc."

Half of that statement is dead on: McCabe, a former coastal commissioner, is one of the top dogs among Coastal Commission lobbyists.

However, a contract McCabe had with San Diego was canceled after e-mails surfaced in which she boasted that she had been "spoon feeding" one coastal commissioner information for that city's project, according to the *L.A. Times*. The port allowed her contract to expire without renewal, and the port chairman later wrote an apology to the Coastal Commission.

Local officials said they were unaware of this fact when they hired her. (Though a Google search of "Susan McCabe lobbyist" turned up a myriad of *Times* articles detailing her exile from San Diego.)

Through Delzeit, McCabe later issued a statement, saying, "During the course of the negotiations [with the Coastal Commission] I made remarks in internal e-mails to the Port [of San Diego] staff that I regret. I have addressed this matter privately with those involved, have learned from the experience, and have put the matter behind me. Since that time, I have successfully represented a number of clients on matters before the Coastal Commission."

Commissioners and staff are generally easily accessible. In fact, they would rather hear from people building a project than the people who are paid to sell it.

"I would much rather hear from the local electeds—from the property owners themselves—than the consultants," said Commissioner Mark Stone, a Santa Cruz County supervisor who's served on the Coastal Commission for two years and returned a phone call from a reporter in about 10 minutes. "Because they're the ones who are going to tell me what's going on, on the ground ... in a way that I can understand."

Several local and state officials said they see lobbyists and consultants spend a lot of time and money convincing local politicians they need lobbyists and consultants. One commissioner said they would rather hear directly from municipalities, but that they wouldn't hold it against them for hiring McCabe.

One local official, when asked about a lobbyist's role, responded, "I don't even know what they do."

McCabe declined to comment on this story and said all requests had to go through Delzeit.

But McCabe is far from the only consultant shepherding the Morro Bay and Cayucos wastewater project.

As of this printing, Morro Bay and Cayucos have hired at least seven separate consultants to plan, design, review, and advocate for a new sewage treatment plant that's currently about 15 percent complete in its design and is facing a bucket list of Coastal Commission requirements before it can be built.

It's been five years since the two communities contracted the first consultant to begin planning for a plant upgrade project. Morro Bay and Cayucos have, as it stands, a project proposal that could be in need of a complete overhaul.

Consultant fees have so far cost about \$1 million in what could ultimately be a \$34.3-million project—unless it gets more expensive.

Most recently, the JPA voted to spend no more than \$350,000 for an environmental analysis of other potential sites where the treatment plant can be built. It's nothing new; residents, a few local politicians, and the Coastal Commission itself have warned that the Morro Bay/Cayucos

design won't fly with regulators unless it's shown to be the best one available. However, the original plan and environmental review documents produced by past consultants are in danger of becoming obsolete.

"You hire a consultant, and they have no responsibility for the outcome," said one local official intimate with the project.

The consultant gig can be a cut-and-run game in which the consultant submits a proposal, then skedaddles before that proposal is put to the test.

"This means they can do anything they want, charge anything they want, and if it doesn't work out, then you have to pay more," said Gail McPherson, a wastewater division manager from Riverside----now acting director for Citizens for Clean Water.

Problems from the beginning

In early 2003, the Central Coast Regional Water Quality Control Board informed Morro Bay and Cayucos that the communities—which share a wastewater treatment plant in Morro Bay, just off the Pacific coast—would have to upgrade the plant to a higher treatment standard or face penalties.



LINK TO THE PAST

Project Manager Dennis Delzeit and his partner, the Wallace Group, are working to manage the Morro Bay/Cayucos sewer project.

PHOTO BY STEVE E. MILLER

With a March 2014 deadline, the two communities started scrambling to beef up the treatment plant, first banding together under a Joint Powers Authority that joined the Morro Bay City Council and Cayucos Sanitary District Board of Directors at the hip, tacking on a backup team of planners, engineers, and lawyers.

With a final price tag of \$218,996, Carollo Engineers was officially awarded a contract to develop a Facility Master Plan in April 2006 (the same company had developed a time schedule for the project in November 2004). The company produced what was essentially a blueprint for the best way to meet the water board's requirements, plans to upgrade the treatment facility, and preliminary designs.

The problem was, Carollo set the course for a treatment plan "upgrade," essentially telling Morro Bay and Cayucos they could spruce up the old plant, keep it on the same site, and make out fairly cheaply, as compared to the cost of building a new facility.

"All along, this was always conceptualized as a remodel of the existing plant," said Foster, the JPA member from Cayucos.

The real problem is the treatment plant sits in a 100-year flood zone. While that might not have been an issue when the plant was first built, environmental standards have tightened since then.

Almost from the beginning, the design was in trouble. It soon became clear an upgrade wasn't possible, but Morro Bay and Cayucos would need to build a new treatment plant, though the site they had selected would likely never stand Coastal Commission scrutiny, particularly because it placed only one alternative site on the table.

The notion that Morro Bay and Cayucos could simply upgrade the existing plant was soon squashed as residents, a few local officials, and eventually the Coastal Commission put in writing that alternative sites had to be identified and analyzed.

Yet the design trudged along.

For \$375,000 the JPA hired Environmental Science Associates (ESA) to perform the environmental review, continuing on the assumption that the project would be a relatively routine plant upgrade. ESA came back with an Environmental Impact Report that identified one alternative site in the Chorro Valley, two if you count the "no project" alternative. Coastal Commission staff forwarded its comments on the proposed environmental document, pointing out that a hefty alternative site analysis would be crucial if the project would move forward.

By this point, critics were virtually screaming for more review of alternative sites. In fact, Morro Bay planning commissioners tried to halt the project to allow for other sites to be reviewed.

That analysis never went forward.

On Jan. 11 this year, the City Council voted 4-1 to go against its commission's recommendation for further analysis and certified a coastal EXHIBIT of development permit for the project. A-3-MRB-11-001

55 of 363

The project they had, based on the Carollo plan, was to be designed by Montgomery Watson Harza (MWH), which was awarded a \$2.7 million contract in February 2010. A seven-member panel selected MWH to complete-basically fine tune—the design based on the Carollo plan.

By late January of this year, 11 appeals were filed with the Coastal Commission, including two appeals from Commissioners Stone and Mary Shallenberger. Based on staff recommendations, and a preliminary hearing, commissioners decided the appeals have validity, leaving Morro Bay and Cayucos a list of concerns to address before a formal appeal hearing, which has yet to be scheduled.

"In summary, the approved project appears to be inconsistent with numerous policies of the city's [Local Coastal Plan], including policies related to coastal hazards, public access and recreation, public works, and visual and archaeological resources," according to the commission's staff report on the appeals.

Of course, these problems were nothing Morro Bay and Cayucos officials hadn't heard before.

"None of this would have been required if the city had followed the two letters from the Coastal Commission that told them what they had to do," said Barry Branin of Citizens for a More Affordable Wastewater Treatment Plant in Morro Bay.

It all raises the question: How did this troubled project get this far when so many people were being paid to give their best advice?

Back and forth and back again

On May 12, when asked if she had ever before worked on a sewer project, McCabe said she couldn't recall doing so.

It was the type of comment that sucks the air out of a roomful of lungs. Audience members' mouths hung agape. After all, some residents had already bashed JPA members simply for hiring a lobbyist at all.

"You guys obviously don't know anything," one resident said.



BUREAUCRAT BRADY BUNCH

The Morro Bay City Council and Cayucos Sanitary District Board of Directors comprise the Joint Powers Authority tasked with making decisions regarding the wastewater treatment plant upgrade. PHOTO BY STEVE E. MILLER But she's familiar with the area. In 2004, McCabe was a SLO County lobbyist advocating for SLO County while its Local Coastal Plan update was before the Coastal Commission. At the time, the socalled Tri-W project in Los Osos was in the hands of MWH, alongside another San Luis Obispo County favorite, the Wallace Group.

If some of the names and companies working on Morro Bay's and Cayucos' project seem familiar, it's because they are. In the Los Osos project, members of the Wallace Group and Carollo specifically Lou Carella, who worked briefly for MWH—sat on the panel that recently selected MWH as one of the top three firms to design and build the most recent incarnation of the Los Osos sewer project.

In fact, Delzeit's contract with Morro Bay is a joint venture with him as the project manager along with the Wallace Group. On paper, Delzeit and the Wallace Group are virtually synonymous. Every page of his contract pitch for the project management gig is labeled "R. Dennis Delzeit & Wallace Group."

Delzeit was also part of a seven-member review committee that selected MWH to design the Morro Bay/Cayucos project.

Morro Bay Capital Projects Manager Dylan Wade, who worked for MWH until April 2007, also sat on the selection committee. (Wade, however, recused himself from the final stage of the selection process, he said in a previous interview.)

"It seems pretty clear that we just keep on reverting to the same firms," said one local official.

Indeed, some of the same MWH people who designed the Los Osos project are part of the MWH team in Morro Bay and Cayucos.

And the price tag is rising.

Exhibit 6 A-3-MRB-11-001 56 of 363 To date, the project has been expected to land within its \$34.3 million total budget. Asked about the status now, Delzeit guessed that the budget is on track, but might need to dip into contingency funds.

Costs so far have been paid through a reserve fund of ratepayer money held by the treatment plant operators. As the project moves forward, the plan is to pay for the construction (about \$27 million) using a State Revolving Fund loan, which will be repaid through increased user rates.

For now, the Morro Bay/Cayucos project is stuck in limbo, which is probably the safest it will be for a while. As the Coastal Commission appeal is ongoing, the JPA has suspended MWH's work, which is about 15 percent complete with a running bill of \$371,407.

Most recently, the JPA on May 12 agreed to let Delzeit and McCabe work with the Santa Barbara engineering firm Dudek to settle on a scope of work and payment schedule to complete the long-awaited alternatives analysis and address other Coastal Commission concerns. McCabe will remain in a pseudo-consultant role, but Yates stressed that she's not supposed to draw large bills.

"Staff has made the case that during the scoping, they may need her expertise, and if they do they can call on her," he told New Times. "... So I think they're going to be very cautious if they do that, and that falls right into [Delzeit's] monthly reports. We are watching what's going on."

The next step is the Coastal Commission itself, which will decide whether the ragtag group of consultants has done its collective work and give the proposed treatment plant a pass or fail.

But if it's a fail—if commissioners decide there's another place to build a sewage treatment plant outside of a 100-year flood zone on the coast—then the current design and all the work that led to it is, to put it lightly, obsolete, if not completely screwed.

If coastal commissioners pick another site, Mayor Yates said, "then the design work that's gone on at the present location would be in vain and we would start over."

"That would involve doing a facilities master plan on a different site," Delzeit said. "It would involve doing an environmental document with likely an Environmental Impact Report on another site. So yes, it would involve redoing these studies, and it would involve a lot of additional consultant expense, and, of course, the time necessary to go though these documents."

If that's the case, it will also be well beyond the life of Delzeit's current contract. When Delzeit was hired, he wasn't hired to handle an appeal to the Coastal Commission. He said there was no knowing at the time what would be the basis of such an appeal, so it was essentially left out of his contract. At his going rate, he figures he'll have maxed out his \$250,000 fee by July 2012, at which time the JPA can either extend his contract or let it lapse and go another route.

No matter what happens, the work that's been done is done. No one can go back to Carollo, for example, and have the company redo its work. All that's left, if the project is in need of a redesign, is to hire someone else.

"The Carollo contract, they've completed all their contract requirements," Delzeit said. "So they're out of the picture."

Meanwhile, the project is getting its first break. The water board has granted a time extension until the Coastal Commission appeal is decided, and JPA meetings will likely be devoted to updates on Delzeit's and McCabe's costs, as well as the status of the alternative sites analysis.

What no one wants, though, is a replay of Los Osos—a project that has skyrocketed in cost over three decades and countless revisions. But as it moves forward—manned by many of the same people and companies for a project that may need to relocate—it seems the Morro Bay/Cayucos project could be facing the same fate.

News Editor Colin Rigley can be reached at crigley@newtimesslo.com.

Exhibit 6 A-3-MRB-11-001 57 of 363

Allegations, Accusations and Denials -MWH and its Customers in New Orleans, Cape Coral, Los Osos, and Morro Bay

by Kari Olsen

When New Orleans Inspector General Edouard Quatrevaux issued his report, "<u>Review of City of New Orleans</u> <u>Professional Services Contract With MWH Americas, Inc. For Infrastructure Project Management</u>," Los Osos and Morro Bay activists were intrigued. Findings listed by Quatrevaux in his April 21, 2010 report sounded, according to the residents, very similar to allegations made regarding MWH's work practices in SLO County.

Problems with MWH have also been reported in Cape Coral, Florida. Formal audits have documented a number of concerns, and <u>Cape Coral Mayor John Sullivan is currently calling for a new audit by Kessler</u> <u>International</u>, a firm that first investigated the activities of MWH and its business partners in 2006. Findings from <u>that audit</u> included numerous alleged irregularities, including issues with contract bidding procedures, billing, and obstruction of Kessler's efforts to obtain information from contractors and city employees.

Residents of Morro Bay have frequently voiced concerns regarding their wastewater treatment plant (WWTP) project, and have identified similarities between their concerns and issues raised in neighboring Los Osos. In a November, 2010 *Journal* article, "Is the Morro Bay/Cayucos WWTP Project Already 'Another Los Osos'?," it was noted that, "For both projects, residents have cited issues with out-of-control costs, the presence in the project areas of Chumash and Salinan archaeological sites, and allegations of inappropriate ties between government officials and Montgomery Watson Harza (MWH)."

MWH business practices in Cape Coral and New Orleans have been reviewed by highly-trained professionals. Allegations of wrongdoing in those cities are detailed and extensive, and have been presented in formal audit reports. Los Osos and Morro Bay residents have not yet had the benefit of a professional investigation of their concerns, but have conducted their own research, documenting and reporting the results in complaints to the authorities and in local news sources.

Most of the key problem areas identified are common to all four cities and include RFP and contract award issues, allegations of billing irregularities, problems obtaining records for independent audit and review, and allegations and implications of inappropriate ties between MWH and city officials and staff members.

RFP and Contract Award Issues

In Los Osos, Morro Bay, Cape Coral, and New Orleans, there have been allegations of improprieties in way that MWH was awarded contracts. In all cases, concerns regarding possible public employee bias and favoritism have been either implied or directly stated. In addition, there are concerns regarding the way in which MWH has brought subcontractors into its projects.

<u>New Orleans</u>: The first finding in the New Orleans Inspector General's report states, "The city selected MWH through a flawed procurement process that failed to produce meaningful competition." The report further states, "After issuing three separate RFPs and selecting seven firms for contract awards, the City inexplicably changed course and negotiated a contract with only one of the chosen firms–MWH. The city provided no documentation to show how or when the decision was made to eliminate the other six selected firms from consideration in favor of directing all the work to MWH." And, "After MWH was selected, the parties entered into private for the private form."

A-3-MRB-11-001 58 of 363 negotiations over a four-month period that resulted in a major contract estimated at the time to be worth up to \$48 million."

The report also states, "We asked city officials in an interview to explain the rationale for awarding a contract for up to \$48 million on the basis of a proposal with a maximum cost of \$150,000. The city officials said that the evaluations of all three RFPs were considered in the selection of MWH for the contract. This explanation does not alleviate the problematic character of this procurement. A basic tenet of fair competition is that the rules for proposal evaluation must be clearly stated and all proposers must be treated equally. Competing firms were not informed that responses to other RFPs would be factored into the selection process. MWH was the only firm to respond to all three RFPs and therefore received unequal treatment when the city considered all three."

The inspector questioned the rationale for awarding MWH the contract, given his finding that its rates were not competitive: "A review of contract billings showed that MWH charged the city substantially more for labor than either Burk-Kleinpeter or Regional Management Group would have charged for personnel with comparable qualifications. Total MWH billings for program managers, engineers, architects, construction managers, and other identified classes of labor were more than 20% higher than the cost of the same services at the rates proposed by the two other firms. In addition to charges for these identified labor categories, MWH billed substantial sums under categories with vague, non-descriptive titles.

For example, MWH charged more than \$4.5 million for personnel described only as "professional," with no indication of their qualifications. The fees proposed by those two firms are compared with fees the city negotiated with MWH in Figure B on page 12. Both Regional Management Group and Burk-Kleinpeter proposed substantially lower fees than those negotiated with MWH, yet all three firms received the same score for cost (15 points) for the Construction Management Services RFP, as shown on Figure A on page 9. The relative scores for the Public Infrastructure Management RFP were even more irrational, with Regional Management Group receiving 10 points for cost compared with MWH's 20 points. After receiving the highest possible score for cost, MWH was allowed to negotiate higher fees than those proposed by its competitors. These results show that the scores awarded for cost were meaningless."

<u>Cape Coral</u>: MWH did not bid for the contract to perform work for Cape Coral. According to the Kessler report, "In April, 1999, the city entered into a five year contract, with Kellogg Brown & Root, Inc. (KBR), a division of Halliburton, to complete the first phase of the UEP. In August 2002, the contract was assigned to MWH Constructors Inc. (MWHC). While we were informed that this was allegedly due to KBR's inability to provide the necessary bonding, a separate agreement between KBR and MWHC indicates that KBR declined to provide the "requisite construction performance and payment bonds."

Kessler investigated to determine if there were any ties between MWHC and KBR. The audit report states, "Kessler learned that MWHC utilized the address of 2503 Del Prado Boulevard, Suite 420, Cape Coral, FL 33904 on invoices and supplied it to vendors and has found bills addressed to MWHC at this address. The Halliburton <u>website</u> indicates Brown and Root Services is located at this same address. The MWH <u>website</u> lists its office at 2503 Del Prado Boulevard, Suite 430, Cape Coral, FL 33904. It is noteworthy that documentation submitted to the city by MWHC would indicate a mailing address that is actually the address for Brown and Root services."

MWH has denied any connection between the firms. In <u>a letter written to John Sullivan, Mayor of Cape</u> <u>Coral</u>, Joseph Adams, President of MWHC said, "Our work on the UEP began when MWH took over the city of Cape Coral's contract with KBR in 1999 because KBR could not obtain a construction bond. MWH is not owned by or affiliated with KBR or its former parent company, Halliburton. We are an independent, employeeowned, private company."

> Exhibit 6 A-3-MRB-11-001 59 of 363

With regard to the manner in which KBR was awarded the contract that it subsequently assigned to MWH, the city's website, at the time of the audit, included this statement: "The selection of Kellogg, Brown & Root as the 'Construction Manager at Risk' was done in accordance with Florida Statutes (F.S. 287.055). The statute provides for the competitive selection of an engineering firm based on qualifications, not price. (For example, you probably want the best-qualified builder to build the Shuttle and not the lowest bidder, so you select the most qualified and then negotiate prices.) Eight of the top engineering firms in the country submitted packages. The three top firms were interviewed"

The Kessler audit also identified problems with the manner in which subcontractors were hired. One of the reported problems was the way that KBR/MWH advertised for bids for the subcontracts. There were concerns that the law was violated and, according to Kessler, a communication from the Florida Department of Environmental Protection (FDEP) to the city indicated that the procurement of subcontractors was flawed. The communication included this statement: "the CM's procurement of pre-qualified construction contractors and negotiating practices may not be consistent with our (SRF) philosophy of open competition."

Other subcontractor procurement issues documented in the report include this statement: "The process used by Public Works and the CM to select subcontractors is dubious at the very least and requires further investigation by an agency capable of compelling testimony and subpoenaing records." Kessler recommended that its findings with regard to subcontractor procurement "be turned over to the U.S. Attorney's Office, Anti-Trust Division as well as the Federal Bureau of Investigation so that further investigation could be pursued."

Los Osos: Alleged improprieties related to MWH contracts awarded in Los Osos include bias and favoritism shown by public employees, awarding of contracts without legally-required competitive bidding, and ineligibility issues. Former Los Osos Community Services District President Lisa Schicker's October 21, 2010 *New Times* article, "Sewer Project Would Dispossess Many Los Osos Homeowners," reported several contract-related issues: "MWH designed the failed project for the Los Osos Community Services District (LOCSD); an expensive downtown project that voters rejected. They had a habit of securing reasonable contracts that were repeatedly "amended" into millions of dollars of additional costs—essentially no-bid, no-competition. Their last so-called "amendment" with LOCSD was a no-bid contract for \$7.48 million dollars—one they recommended for themselves. Paavo Ogren was the LOCSD's first manager. He arranged MWH's first contract. Bruce Buel came next. A 2006 letter from second-manager Buel to third manager Dan Bleskey stated that after his arrival, manager Ogren requested that he backdate (isn't that illegal?) LOCSD's first contract with MWH; Buel complied with Ogren's request."

The backdating referred to by Schicker was reportedly recognized by the district attorney as being a case of falsification of records, but he declined to pursue the matter, stating that the statute of limitations had run out. According to a March 6, 2006 letter to Steve Brown, Senior Deputy District Attorney from Julie Hayward Biggs of Burke, Williams and Sorenson, LLP, the fact that the backdating was not discovered until 2005 meant that the case could still be pursued. Biggs quoted California Penal Code Section 803 as follows: "(c) A limitation of time prescribed in this chapter does not commence to run until the discovery of an offense described in this subdivision. This subdivision applies to an offense punishable by imprisonment in the state prison, a material element of which is fraud or breach of a fiduciary obligation the commission of crimes of theft or embezzlement upon an elder or dependent adult, or the basis of which is misconduct in office by a public officer, employee, or appointee, including but not limited to, the following offenses: 1) Grand theft of any type, forgery, falsification of public records, or acceptance of a bribe by a public official or a public employee." The District Attorney still declined to pursue the matter.

In her article, Schicker further commented that, "Last March, without explanation, the county eliminated a topranked engineering team guaranteeing a 20-percent savings over competitors for building the wastewater project. Instead, they selected the giant multinational firm Montgomery Watson Harza (MWH) as one of three short-listed firms for both major contracts. The interview panel recommending MWH was comprised of county employees and consultants, selected by Public Works Director Paavo Ogren." Los Osos restants on the 60 of 363
often alleged that Ogren has close ties with the firm, making his participation in the contract award process inappropriate. Ogren once worked for an MWH subcontractor, and has been involved with MWH in Los Osos since 1998.

A <u>Rock of the Coast article</u>, written by Ed Ochs, addresses MWH's eligibility for a specific contract they were awarded in Los Osos: "Montgomery Watson Harza was favored with their own outdated (2004) gravity sewer design, even with an apparent violation of California Public Contract Code 20133, that specifically states, 'Any architect or engineer retained by the county to assist in the development of the project specific documents shall not be eligible to participate in the preparation of a bid with any design-build entity for that project.' "

<u>Morro Bay</u>: Contract-related concerns regarding Morro Bay's wastewater treatment plant (WTTP) project are similar to those identified in the other three cities. Allegations of wrongdoing include a flawed RFP process, public employee bias, and failure to adhere to the city's Municipal code.

The July, 2010 Journal article "<u>A Tale of Two Cities' Wastewater Treatment Plant Projects</u>" reported residents' concerns, including the posting of an invalid RFP issuance date on the city Web site. The project schedule posted by the city indicated that the RFP was to be issued on May 31, 2010. However, it was actually issued October 1, 2009, 8 months ahead of schedule. At least one firm was reportedly relying on that schedule to time its entry into the competition for the contract, and was thus shut out of the formal RFP process.

Some residents' concerns focused on potential conflicts of interest. Dylan Wade, the city's Capital Projects Manager, is a former MWH employee. Yet, he was allowed to be on the committee that selected MWH for the WWTP design contract. Residents also noted that one of the MWH subcontractors listed in the firm's proposal as a "teaming partner" was local firm RRM Design Group. The Chief Financial Officer of RRM Design Group is Gregory Peters, brother of Janice Peters, who was Mayor of Morro Bay at the time the contract was awarded.

Other reported concerns included the city's inability to produce evaluation forms rating the bidders for the WWTP design contract. The *Journal* reported one resident's attempt to obtain the forms: "She was initially told that they either did not exist, or were exempt from disclosure. She complained to the City Council and was subsequently told that the completed forms had been retained by individual evaluation committee members and were not available. No explanation was given as to why they could not be obtained from the individuals who were said to have retained them. Completed evaluation forms are considered by RFP experts to be a critical component of the audit trail necessary to ensure that an RFP process has been conducted fairly. "

The MWH bid was the highest of the five received for the design contract. Its acceptance violated the city's municipal code which requires selection of the lowest bidder. As did staff of Cape Coral, Morro Bay staff claimed that the city was forced by law to choose the vendor it considered most qualified, rather than basing its choice on the amounts of the bids and selecting the lowest one. However, some legal experts have stated that in such cases, both state and local laws can be satisfied by first identifying a group of qualified bidders, and then choosing from among them the one with the lowest bid. Documents contained in city files indicate that all five bidders were considered qualified for the job.

At the time, Morro Bay deemed MWH the best qualified of the five bidders, stories of serious allegations regarding MWH business practices in Los Osos and New Orleans were appearing in the news. However, city staff stated they found "no red flags" regarding MWH. After MWH got the contract, a new project scope was negotiated.

Some Morro Bay residents have voiced concerns regarding the manner in which MWH brought its subcontractors into the project. In the firm's project proposal, MWH presented its "project team," noting that, "In selecting our project team, we have supplemented our in-house capabilities with local subconsultants" Firms listed include RRM, Fugro, EDA, and Ground Up. The proposal failed to indicate whether MWH had conducted any kind of analysis to ensure that these subcontractors would provide the test A-3-MRB-11-001 61 of 363

service at the lowest possible rates. The proposal did state that, "MWH has worked with all of these firms on past projects in San Luis Obispo County."

Allegations of Billing Irregularities

<u>New Orleans</u>: The Inspector General's report contains a number of findings regarding billing practices. Finding six states, "The contract calls for MWH to be paid on a time and materials basis, a form of compensation that presents a high risk of excessive charges." Finding seven states, "The contract calls for MWH to be paid for expenses on a cost-plus-percentage-of-cost basis, a form of compensation that is specifically prohibited under FEMA rules." MWH had been hired to make repairs following Hurricane Katrina; FEMA funds were involved.

Finding nine states, "MWH's Billings for capital projects provide no basis for allocating costs to specific projects or for keeping MWH's fees in line with overall project cost". Finding 10 states, "The city allowed MWH's fees to mount Faster than the rate of progress on capital projects." Elaborating on that finding, the report notes that, "MWH billings through July 2009 far exceeded the rate of progress on the projects. By that point, MWH had already invoiced nearly \$18.8 million through July 2009, or 39% of the maximum fees it could charge over the life of the project, based on 8% of

the \$597 million estimate. However, the analysis determined that MWH's "calculated progress" on the projects was valued at slightly less than \$15.9 million, or only around 32% of the total maximum fee available. Based on these calculations, the analysis concluded that MWH had billed for approximately 118% of the actual value of its work and had over billed by \$2.9 million through July alone."

In Finding twelve, the report identifies examples of MWH expenses that appear questionable, including \$93,289.20 charge for telecommunications services for a one-month period, gifts for city employees, travel expenses with no apparent connection to New Orleans, apparent double billing for the rental of a corporate apartment, MWH operating expenses, membership costs in professional organizations, MWH employee business cards, donations, 75 polo shirts, and a \$10,559.55 expense for professional liability insurance.

<u>Cape Coral</u>: Kessler's report identifies a number of billing issues. Concerns are raised with regard to billings not authorized by formal agreements. The report indicates that the agreement in which KBR relinquished its role as Construction Manager at Risk (CM*) to MWHC states, "Costs incurred as a direct result of this Assignment shall be bourn by contract assignment, any costs incurred as a direct result of this assignment shall be bourn by Kellogg Brown & Root Inc. and/or MWHC and shall not be chargeable to nor reimbursable by the city."

However, the Kessler report goes on to state that, "despite the fact that all costs incurred as a direct result of the Assignment were to be bourn by Kellogg Brown & Root and/or MWHC, MWHC added two additional staff to work with and coordinate activities with the CM staff and charged them to the city." Kessler further noted that within six months of the agreement, a third part-time employee was billed to the city by MWHC.

Kessler identified another irregularity connected to billings by KBR after it assigned the contract to MWHC, one of which was a lump sum subcontract to MWHA. The report says, "... these billings included a lump sum subcontract to MWHA for the actual design/engineering work which included a 6% administration fee on all MWHA subcontracts and an approximately 10% estimate of direct costs payable whether it is incurred or not. These billings also included a subcontract to Boyle Engineering for modeling and direct costs which included reproduction and permits.

Exhibit 6 A-3-MRB-11-001 62 of 363 "Kessler's analysis has determined that approximately 80% of the Tier Two GMP was comprised of lump sum contracts payable to MWHA. Kessler was not provided any documents that the city ever conducted a review to determine the competitiveness of the costs for these design services. This is a significant concern since KBR accepted MWHA's estimate and added 6% as a handling fee."

Kessler summarized the situation by stating, "The fact that the 'Agreement for Construction Management Services' specifically excludes many costs that were in fact billed in labor rates and hidden from the taxpayer, makes it appear as if someone was using smoke and mirrors to hide these costs."

The Kessler report also describes issues related to subcontractor billing by MWH, indicating that its analysis showed, "... the CM accepted the subcontractor's full proposal on each occasion without negotiation or inserted the Subcontractor unit prices established during the bidding for the area. This is a concern due to the bidding practices documented earlier in this report. There was no evidence that the city ever attempted or had the ability to compare or negotiate costs to lower pricing. In so much as, the CM charged a 6% fee based on the value of the change orders; there is a built in incentive to accept a higher estimate."

It was also stated that MWH had billed the city for "un-billable" labor. Kessler reviewed a sampling of MWHC time sheets, traced the hours in the time sheets to invoices and found that, "... in sixteen of the nineteen instances; they were billed to the city. Kessler calculated the cost to the city for these un-billable hours at \$19.494.81 (Exhibit 44)." Since only a sample of time sheets was reviewed, the amount billed for un-billable labor might have been higher.

Los Osos: Allegations of billing irregularities were leveled at MWH by the Los Osos Community Services District in 2006: In an <u>August 14, 2006 letter</u> to Marshall W. Davert, the Los Osos Community Services district alleged that MWH had "knowingly violated numerous contract provisions and failed to correct these deficiencies in accordance with the contract agreement." The alleged violations include submission of invoices not in accordance with the agreement, submission of multiple invoices for the same work (over billing), and submission of false claims.

<u>Morro Bay</u>: The *Journal* has not found reports of any independent investigation of MWH billing practices in Morro Bay. MWH's work on the design contract was suspended due to substantial project issues identified by the California Coastal Commission.

Alleged MWH Resistance to Providing Records for Audit and Review

<u>New Orleans</u>: In Finding 3, the Inspector General's report states, "MWH has refused to provide evidence that it is honoring its contractual obligation to charge the city its 'most favored customer rates." The report indicates that, "Both MWH and the city appear to have disregarded a contract provision titled "Truth-In- Negotiation," that states: As of the Effective Date of this Agreement, Contractor represents and warrants that the rates charged city . . . for the performance of the Services are no higher than those charged Contractor's most favored customer" rates are reduced during the term of this Agreement, Contractor shall be obligated to promptly notify city of such reduction in writing, and such reduced rates shall apply to any services provided on or after the date that Contractor first reduced such rates." And, "In response to our request, MWH replied: MWH does not provide any of the same services or substantially similar services of which it provides to the city under the project management contract with any other client for which it can provide rate schedules."

"The assertion that MWH's services to the City of New Orleans are completely different from services provided to any other customer strains credibility, particularly in light of representations MWH made in its proposal for the Infrastructure Project Manager contract: MWH has unparalleled experience in managing major Exhibit 6 A-3-MRB-11-001

63 of 363

infrastructure and building projects, including the interaction between federal, state, and local governments and non-governmental organizations.

"MWH's unwillingness to provide any evidence that it has honored its promise to the city casts doubt on whether the company negotiated the compensation terms in good faith."

<u>Cape Coral</u>: The Kessler report identifies several instances in which its attempts to obtain documentation for review met with apparent obstruction. The report indicates that subcontractors were instructed not to provide documents requested by the audit firm:

"Two written requests for documentation were sent to the five main subcontractors involved in these projects (Exhibit 8). The aforementioned requests sought copies of contracts, submitted bids, invoices submitted to the CM, correspondence and meeting minutes applicable to the projects and a report of all injuries that may have occurred throughout the duration of the projects.

"Kessler discovered that these attempts were stifled by the CM, as reflected in an e-mail exchange (Exhibit 9). As revealed in this exchange, the CM prepared an e-mail (which the city received cc's) to the five subcontractors and instructed them to "disregard" Kessler's requests until the city addressed the need for that request."

When Kessler requested copies of cancelled checks to subcontractors, in order to verify that the amounts charged to the city and those paid to the subcontractors were accurate," MWHC sent two letters stating that they did not intend on providing Kessler with the cancelled checks payable to subcontractors."

When asked for copies of close-out change orders as part of its work to verify subcontractor billings, MWH offered a sample of ten "selected monthly payments" for review. Further negotiations resulted in receipt by the audit firm of a larger sample, but it was made clear that "there will be administrative costs involved."

The documents Kessler was able to obtain showed some apparent irregularities: "one of the checks which should have been payable to Southwest Utility Systems Inc. was in fact drawn to 'Southwest Utility Systems' and was hand endorsed 'For Deposit Only R. Cowart.' It is unclear why this vendor would receive checks amounting to millions of dollars not payable to the correct corporate entity and why the check would have been endorsed in an individual's name."

MWH refused to provide Kessler with payroll information for time sheet verification stating, "As indicated in our letters dated March 23 and April 7, 2006 we will not be providing raw salary payroll information for time sheet verification. This decision was made for reasons stated in our response above and was a precedent set on the previous audit conducted on a work authorization under this agreement." After pressing the matter with city officials, Kessler was able to obtain a three-months sample of the requested documents – with personal information removed.

Los Osos: The Los Osos Community Services District (LOCSD) made a number of allegations that MWH obstructed access to information on its activities in Los Osos. An August 14, 2006 letter from the LOCSD to Marshall Davert alleged that MWH, "Has had numerous substantive contacts and communications with contractors, regulators, governmental agencies, litigants and other third parties and has not copied the District, despite the District's request for such copies, minutes and transcripts of such contacts and communications."

The letter also alleged that the firm had "Submitted inaccurate, false and misleading information to the District, local and state agencies in support of but not necessarily limited to, regulatory requirements, permits, financing and licenses (Section 10(A) and (B))," had "not provided copies of all electronic data as requested by the District including but not limited to e-mails, data files, CAD data etc.," and had failed to provide a copy of the

Exhibit 6 A-3-MRB-11-001 64 of 363 original Certificate of Insurance, proof of Liability Insurance, and Certificates of insurance evidencing renewal of coverage

Some Los Osos residents have alleged or implied that a theft of MWH records was not a random act, but rather a deliberate maneuver to keep records out of the hands of investigators. A 2005 *New Times* Article, Los Osos Engineer Reports Theft of Official Records, states that, "Montgomery Watson Harza, project design engineers for the controversial Los Osos sewer, reported Monday that files and computers had been stolen from their local office at Sunnyside Elementary School. The theft coincides almost perfectly with an announcement from the CSD of a resolution to investigate activities pertaining to sewer contracts, spending, and design." The same night, computers were stolen from a Los Osos real estate firm that residents allege was working directly with MWH.

Morro Bay: The Journal has received no reports of residents or officials requesting documents from MWH.

Allegations and Implications of Inappropriate ties between MWH and City Officials and Staff

<u>New Orleans</u>: The Inspector General's report includes a number of findings that might be interpreted as indicating inappropriate ties between MWH and the city. Those include the manner in which the contract was awarded and the way billing was managed. For example, the report says, "The rationale for giving MWH high scores for cost in the absence of fee information is puzzling. The city had no basis for comparing MWH's fees with those proposed by other firms during the selection process because MWH was allowed to avoid providing this information. The lack of any genuine price competition may have resulted in the city paying higher rates than necessary. Communications provided by MWH show that MWH did not submit proposed fees to the city until December 8, 2007, over a month after the parties had entered into exclusive negotiations and only 13 days before the contract was signed. At this stage of the contracting process, MWH faced little pressure to ensure that its fees were competitive".

As previously noted, the report raised concerns regarding the billing methods the city allowed MWH to use and some of the specific items billed for. These reported city failures to protect taxpayers from overcharges have been alleged by some to indicate that city employees and officials were colluding with MWH. Others have claimed that the problem is simply that the city did not manage its finances correctly.

Report Finding thirteen states, "MWH employees sought reimbursement from MWH for gifts to city employees and elected officials." This practice is generally considered inappropriate and is commonly prohibited by law.

The report states, "We determined that in at least two instances, the city procured services from other firms by instructing MWH to enter into subcontracts with the firms and act as a pass through for billing purposes. This practice circumvents the requirement for competitive procurement of services through an advertised request for proposals." Some observers have claimed that this practice implies the existence of an inappropriate relationship between city officials and/or staff, and MWH.

<u>Cape Coral</u>: The Kessler report documents several incidents that some have interpreted as indicating that city staff members had inappropriately-close ties to MWH and KBR. In one case, the City Manager told Kessler staff that he was unaware of issues regarding a Kessler request for documents, submitted to the City Clerk. However, Kessler subsequently obtained an email, written by the City Manager several weeks before, that showed that he did know of the request for documents, having received a copy of a request from Kessler for "... detailed records from KBR/MWH regarding their employees as well as subcontractors who worked on our Utility Projects." That email had been sent by the City Manager to two MWHC employees and to the Public Works Director.

Exhibit 6 A-3-MRB-11-001 65 of 363 Kessler also documented problems with the nature of documents that the Public Works Department supplied in response to information requests, noting that, "During the engagement, Kessler was supplied thousands of documents by Public Works however; the majority of the records at the onset of field wok made available by Public Works were not the documents Kessler requested. After a cursory review, it was determined that many of the documents provided were not even applicable to projects included within the scope of this engagement." And "Public Works personnel hindered Kessler's ability to proceed with its assignment by mandating that all document requests and correspondence of the CM must be routed through a Public Works employee."

Incidents like those described above might imply, but are not direct proof of inappropriate ties between city employees and their contractors.

However, at least one allegedly-improper relationship was specifically documented. Kessler's review of internal city emails also found that one high-ranking city employee "socializes and has close personal relationships with many of the key personnel of KBR and MWHC involved in the UEP."

Los Osos: Allegations of inappropriate ties between MWH and local officials have focused on several LOCSD and county officials, including members of the San Luis Obispo County Board of Supervisors, County Pubic Works Director—Paavo Ogren, and on members of the Regional Water Quality Control Board (RWQCB). CSD and RWQCB officials were accused by some Los Osos residents of colluding with the county and with MWH to force residents to accept a project that will allegedly cost residents far more than necessary, and that uses technology that is both outdated and inappropriate for use in sandy soil in an earthquake-prone area. All of the agencies were criticized by some Los Osos residents for refusing to consider other less costly and allegedly-safer alternatives.

In a Grand Jury complaint filed in 2009, a Los Osos resident noted that, "The BOS voted to accept the short listing of an engineering firm named MWH for the waste water design build project–a firm that was interviewed by a panel of its formal business partners (Carollo and Wallace) and who also has a questionable backdated contract involving Paavo Ogren when he served as manager of the LOCSD. MWH was also hired by both Paavo Ogren beginning in in 2006 (without legally required waivers from the LOCSD) and also by their formal business partners Carollo (working for the county–no bid contract) –beginning in 2007–to work on the wastewater project as a sub consultant, a violation of design build code 21033.

"Just as in other departments within the county government who have recently been exposed, Public Works Director Ogren has made it a habit of issuing large no bid contracts to a very "select" list of firms and individuals, which is not how it is supposed to work in county government, nor does it serve the taxpayer, or is it allowed for fair competition in an open market." These allegations have been echoed in local online news sources. The resident who filed the Grand Jury complaint reported that no investigation took place. The resident further stated that although she confirmed that her complaint had been received, when she personally spoke with several Grand Jury members later that year, she was told that they had never seen her complaint.

Los Osos residents have also raised concerns regarding a \$10,000 contribution that MWH made to "Save the Dream" –a Los Osos political group. A Los Osos resident discovered the contribution in the group's tax records. The group was, according to residents, formed not only to support the sewer project that MWH was to build, but to prevent the recall of three LOCSD Board members who favored the project. The recall, however, was a success and the Board members were voted out. Shortly after MWH made its contribution, a prominent member of the group donated \$10,000 to the political campaign of Bruce Gibson. Some Los Osos residents have alleged that these events indicate that the \$10,000 was in fact a donation by MWH to Gibson's campaign.

<u>Morro Bay</u>: Residents have alleged that the RFP process that resulted in the selection of MWH was suspicious in nature. Allegations regarding the process focus on the city's posting of an invalid proposal submission timeframe on its website, the city's inability to produce completed evaluation forms showing how the selection Exhibit 6

A-3-MRB-11-001 66 of 363 committee evaluated the five bidding firms, and the fact that MWH's bid was not the lowest, but the highest bid received from five qualified firms.

Allegations regarding specific individuals focus mainly on the fact that Dylan Wade, Director of Capital Projects, is a former MWH employee, and the fact that the Chief Financial Officer of RRM Group, a subcontractor named in the MWH proposal, is the brother of Janice Peters, who was the Mayor of Morro Bay at the time MWH was awarded the contract.

Also cited by residents alleging improper city government ties to MWH is the apparent unwillingness of some city officials and staff to seriously consider the offering of PERC Water. That firm was willing to build a WWTP using technology far more advanced than that planned for the MWH-designed project, and to do so for a guaranteed price projected to be millions lower than the expected total for the project favored by the officials and staff. PERC withdrew after city staff refused to sign a non-disclosure agreement to protect its intellectual property, and produced a Draft Environmental Impact Report that excluded the PERC approach.

Allegations Denied

MWH has disputed the allegations of misconduct in New Orleans, Cape Coral and Los Osos; most recently in a <u>letter dated March 14, 2011</u>. The letter, written by Joseph Adams, MWHC president, strongly disputes all allegations of wrongdoing in those cities.

<u>New Orleans</u>: Discussing the Inspector General's findings in New Orleans, Adams states, "After completing our respective reviews, the city of New Orleans provided the OIG with a response which included the MWH response and refuted the numerous misstatements and inaccuracies and demonstrated that: MWH had complied with its contractual obligations; the contract was reasonable and competitively procured; MWH had adhered to its terms; MWH had not billed for any time spent negotiating the contract; and MWH had not conducted any unapproved work."

<u>Cape Coral</u>: With regard to the Cape Coral project, Adams said, "We are proud of the work we completed for the city of Cape Coral. We finished the UEP ahead of schedule and achieved \$26 million in documented cost savings to the city of Cape Coral." Adams also stated that the Cape Coral City Manager had, in 2006, said that she had issues with the audit report. The letter further states that MWH hired its own auditing firm, "PricewaterhouseCoopers (PwC), an internationally recognized accounting firm with whom we had no prior relationship" and that in contrast to the Kessler findings, the firm hired by MWH had found that MWH "completed its work according to standards of business integrity and that we met our contractual obligations."

Los Osos: Adams' letter states that, "The California Regional Water Control Board and the State Water Resources Control Board provided very positive feedback on our work. The California Regional Water Control Board said, "... your efforts ... have resulted in a project that is not only technically, environmentally, and economically sound, but also reflects the input, values and support of the community. This is a commendable feat considering the history of wastewater issues in Los Osos." The State Water Resources Control Board stated, "... the project recommendation was reasonable and cost estimates were justified." The Los Osos Community Services District Board also publicly praised our work."

Morro Bay: MWH staff members speaking at public meetings have defended the firm's work and integrity.

The Debate and the Conflicts Continue

Exhibit 6 A-3-MRB-11-001 67 of 363 The contrasts between the allegations made by auditors and city residents and the responses by MWH are clear, and many issues remain unresolved. Joseph Adams' comments with regard to New Orleans conflict with the content of the final report issued by the Inspector General. That report still contains a number of serious allegations. Cape Coral Mayor John Sullivan has recently stated his intention to bring back Kessler to audit MWH work not covered in its initial review, and, according to local news reports, the city may file a lawsuit to recover money from MWH.

Recently, in a stunning and unexpected turn of events, MWH announced that it would not compete for the Los Osos wastewater project contract recently put out to bid. In Morro Bay, MWH's work on that city's WWTP design has been suspended. The California Coastal Commission (CCC) unanimously found substantial issues with the project's Draft Environmental Impact Report, and no further work can be done until the issues are resolved to the CCC's satisfaction.

In all cases, one thing appears certain. The debate will continue; perhaps long after all of the audits and the projects are over and done.

* The term "contract manager at risk" or, "CM," is a project delivery method. The construction manager agrees to deliver the project for a guaranteed maximum price.

Exhibit 6 A-3-MRB-11-001 68 of 363

Dredged Materials May Contain "Emerging" Contaminants - April, 2011 SLO Coast Journal

Synopsis: Sediments dredged from harbors are frequently deposited on nearby beaches, as was done during the recent dredging of the Morro Bay Harbor. Before any such operation can take place, sediments must be tested to ensure that contaminants are within safety limits. However, the legally-required sediment tests do not cover a wide range of chemicals referred to as "emerging contaminants."

In addition, hydrogen sulfide, a naturally-occurring chemical that can be emitted from dredged sediments, can be harmful if exposure is significant. Several Morro Bay residents reported that the dredged material on the beach had a strong chemical odor that burned their eyes, noses, and throats. Residents of Santa Cruz reported major health impacts after exposure to dredged sediments placed on Twin Lakes Beach. Weaknesses in testing protocols and the experiences of these beach goers raise questions regarding the safety of depositing dredged sediments on our beaches.

In November, 2009, The U.S. Army Corps of Engineers (USACE) started work on the largest dredging operation in the Morro Bay Harbor in nearly ten years. A large quantity of sediment pulled up by the suction dredge was subsequently deposited on Morro Strand State Beach north of Morro Rock. Several residents reported that the material had a strong chemical odor that burned their eyes, noses, and throats.

Responding to a Morro Bay resident's inquiry, a USACE spokesperson stated that, "The organics in the dredged sand at the beach placement area can have a strong odor, which is a complaint we hear a lot. But luckily this odor dissipates rather quickly." The spokesperson also noted that "people should be aware that the beach placement area is a construction area and should be avoided for personal safety purposes."

Man-made Chemical Contaminants Might be Found in Dredged Material

The matter was dropped by the concerned residents until December, 2010, when the Journal reported that nonlyphenols are contaminating the Bay and the ocean. In their story, "Nonylphenol is Polluting the Water in Morro Bay and other Coastal Areas," Carol Georgi and Karl Kempton described the findings of SLOSEA scientists. Noting that nonylphenol is "a man-made chemical in treated effluent released from septic and other sewage processing systems." Georgi and Kempton reported that SLOSEA scientists had found nonylphenols in "significant concentrations in water, sediments and tissue samples from the bay."

The SLOSEA findings raised further concerns in the minds of some of the residents exposed to the dredged sediments on the beach. The USACE had conducted extensive testing of sediments in the harbor before the dredging operation commenced. Why had their tests not detected the high concentrations of nonylphenols identified by SLOSEA's tests? The USACE's testing protocols and test results provided the answer. The tests did not cover nonlylphenols.

Nonylphenols are part of a group of chemicals referred to as "emerging contaminants," compounds that have suspected or insufficiently-defined carcinogenic or toxicological risks. As discussed in the January, 2011 SLO Coast Journal story, "How Does Your Garden Grow," 1,000-2,000 new chemicals are introduced into the environment each year. Standard government testing requirements and protocols are challenged by the sheer volume of new chemical compounds and often do not keep up with the emergence of new threats. Although the USACE's tests were in conformance with all legal requirements, they did not include a number of substances in the emerging contaminants category.

The U. S. Geological Survey (USGS), Toxic Substances Hydrology Program has published a list of emerging contaminants found in U.S. streams. Included are several groups of "household and industrial wastewater products." Of the 39 substances in that list, 10 were covered by the USACE's tests of the Morro Bay Harbor sediments. With regard to what was in the sediments deposited on the beach during the recent dredging operation, there are some unanswered questions in the minds of residents, who will never know what chemicals might have been in the material.

According to a SLOSEA scientist interviewed for this report, some chemicals will dissolve more easily in water than others, and are easier for the body to eliminate after exposure. These are referred to as "hydrophilic" substances. Other chemicals, referred as "lipophilic" do not dissolve easily in water, adhere to organic matter, and have a tendency to accumulate in sediments. Those chemicals, which include such toxins as DDT, are more difficult for the body to eliminate.

Lipophilic chemicals can, according to the scientist, break down in the presence of oxygen and sunlight. However, in an environment where there is little or no available oxygen (referred to as an "anaerobic environment"), lipophilic chemicals can persist for many years. Such chemicals may be found in Bay and ocean sediments.

Exhibit 6 A-3-MRB-11-001 69 of 363 Residents exposed to the "fumes" emanating from the dredged material on the beach have asked whether the seemingly-caustic odor might have been, at least in part, the result of a breakdown of chemicals – a breakdown triggered by the exposure to the plentiful oxygen available in the air, and to sunlight. According to, Handling and treatment of contaminated dredged material from ports and Inland Waterways, Volume I, published by the Permanent International Association of Navigation Congresses, "Removal of the dredged material can change the physical and chemical properties of the sediment, whereby the substances present in the sediment may become mobile or volatile (potentially dangerous for the dredging crew and the environment)" and, "The short term impact of suspended solids may include the migration of (contaminated) sediment from the dredging area to environmentally sensitive locations."

Some Specific Man-Made Chemical Contaminants of Concern

Like the USACE tests, the SLOSEA tests did not cover all of the emerging contaminants listed by the USGS, but the SLOSEA tests did include more of them. Emerging contaminants that were found in the goby fish tested by SLOSEA, but not covered by USACE sediment testing were:

Nonylphenols: These chemicals are primarily used in the production of cleaning products such as detergents, but also in some pesticides. They are believed to affect the digestive system, eye, kidney, liver, reproductive system, skin, throat and the unborn child. They have been banned in European Union (EU) countries and are strictly monitored in many other countries such as Canada and Japan.

Triclosan: This is an antimicrobial, a phenolic diphenol ether used as a preservative, an antibacterial, and an antifungal agent. It is found in numerous bar and liquid soaps and other personal care products as well as household products such as dishwashing soap. The Natural Resources Defense Council (NRDC) has asked the U.S. Food and Drug Administration to ban Triclosan, which breaks down into dioxins, and is a suspected endocrine disruptor. In animal tests, Triclosan was shown to interfere with male and female sex hormones, and with thyroid hormone. The Danish Environmental Protection Agency has reported that Triclosan bioaccumulates (builds up in higher concentrations over time) in fish, in factors thousands of times higher than those found in the surrounding water. According to a report by the Santa Clara Basin Watershed Management Initiative, "Environmental Emergence of Triclosan." Exposure to chlorine in wastewater treatment facilities can produce chlorinated Triclosan which, when exposed to sunlight, can break down into toxic dioxins, chemicals that readily accumulate in organisms. Dioxins are among the most toxic of chemicals, and are known carcinogens.

Diazepam: This drug, first marketed under the name "valium," is used for treating a variety of medical problems including anxiety, seizures, and muscle spasms. A number of potentially-dangerous drug interactions have been documented, and experts have stated the drug is "contraindicated" for individuals with a variety of medical conditions, such as glaucoma and renal deficiencies, as well as for pregnant women and nursing mothers.

The above contaminants are believed to have entered the bay as components of wastewater. Potential sources include discharges from the Morro Bay/Cayucos wastewater treatment plant, the California Men's Colony wastewater treatment plant, leaking sewers in Morro Bay and Cayucos, and agricultural compost made from sewage sludge. As reported by the Journal in a June, 2010 article, "The Condition of Morro Bay Sewer Lines." "Local activists have alleged that the situation is serious, and that sewage leaking from the lines is contaminating ground water, City wells, and the Bay."

Two of the contaminants that SLOSEA researchers found in goby fish were also covered by the USACE tests. These are:

DDT: This lipophilic contaminant is a pesticide found to have significant harmful effects on humans and wildlife. Most uses of DDT were banned in the United States in 1972, but it has remained in the environment in significant quantities. DDT is a known endocrine disruptor, and has been associated with the development of diabetes in some individuals. It is also believed to contribute to genotoxicity (damage to genetic material in cells).

PCB's: These chemicals were once widely used in electrical components such as transformers and capacitors, and in a variety of other products such as adhesives, flame retardants, lubricating oils and sealants. PCB production was banned by the U.S. Congress in 1979. They are known endocrine disrupters and neurotoxins.

These chemicals are believed to have entered the Bay and the ocean from storm and agricultural runoff, and as components of wastewater.

Naturally-Occurring Hydrogen Sulfide Gas Produced by Dredged Material

In addition to man-made chemicals, the dredged material on the beach may have also been emitting hydrogen sulfide gas, a substance commonly produced by the breakdown of organic matter. According to a Port of Seattle document prepared by Windward Environmental and Anchor Environmental, "Hydrogen sulfide is a chemical that is naturally produced as a gas from the sediments that is potentially toxic via inhalation, ingestion, and skin and eye contact. Inhalation can result in respiratory irritation, rhinitis, and edema of the lungs. Subacute exposures to hydrogen sulfide

A-3-MRB-11-001 70 of 363 may result in headache, dizziness, staggering gait, and agitation. Acute exposure at higher concentrations may result in immediate coma and possibly death as a consequence of respiratory failure."

Health-related problems related to hydrogen sulfide exposure were reported by residents and visitors who were exposed to dredged sediments at Twin Lakes Beach in Santa Cruz, California. In an In an October 14, 2005 open letter to the Monterey Bay Air Board, the Community Solutions Group in Santa Cruz reported that, "Adverse health complaints include nausea, headaches, eye and throat irritation, dizziness, loss of balance, mood change, and neurological problems." The letter alleged that thousands exposed to the gas had lacked adequate protection, and that the problems during the prior dredging season had been much worse than reported by the Santa Cruz Port District to the Air District Board and staff. The letter further stated that, "Hydrogen sulfide emissions exceeded the Air District standard 39% of the days during beach disposal. Peak emissions reached 200 times the Air District's standard in the hydrogen sulfide protocol." and, "Emissions repeatedly exceeded California's health standard for "acute" exposure."

Some Santa Cruz residents said that they had been examined by a local physician who administered a battery of neurological examinations to determine possible impacts of the residents' exposure to the dredged material. The residents reported that the doctor stated that they had sustained permanent neurological damage due to the hydrogen sulfide gas exposure, and that the doctor had told them that if they continued to live in close proximity to the dredging activities, they would be at risk.

In 2007, the California Department of Health Services (CDHS), Environmental Health Investigations Branch investigated and reported its findings. The report noted that, "Community concerns related to H2S were reported by a variety of individuals, including residents, visitors to the beach, and some who made anonymous complaints. Community members reported health concerns such as red and burning eyes, blurry vision, conjunctivitis, headaches, agitation and shakiness, heart palpitations, dizziness, nausea, vomiting, bloody nose, sinus infections, worsening asthma, and being mentally "foggy." One person reported having a metallic taste in their mouth. Some were concerned that infants and children (i.e., sensitive populations) who play on the beach might be exposed to H2S or other chemicals related to the dredging. Some community members were concerned when they saw "clay balls" on the beach near the discharge pipe. They were concerned that exposure to H2S was affecting their health in the short and long term."

The study authors indicated that findings were not conclusive due to the fact that, "The identification and analysis of environmental exposure is difficult and inexact. This health consultation was prepared using different sources. There are varying degrees of uncertainty associated with each source of information"

Summarizing the results of the evaluation, and noting problems with lack of certain kinds of information, the study authors said, "Are the health effects that the nearby neighbors (and beach visitors) are experiencing caused by hydrogen sulfide? While it's possible the health effects the nearby neighbors and beach visitors are experiencing could be related to the H2S from the dredge material, it would be difficult to make this determination without a more complete understanding of the chemical's toxicity. It should be stated that CDHS did not medically evaluate anyone as a part of this health consultation. Based on our analysis of the H2S monitoring data, CDHS can not conclude that the health effects were caused by the releases of H2S from beach discharge of the dredged material."

The CDHS stated that its findings did not support a conclusion that the hydrogen sulfide emissions from the dredged material were a public health hazard but nevertheless, the agency made the following recommendations:

the port district should comply with the hydrogen sulfide protocol and establish a clear understanding with their dredging contractors that the dredging should stop for the day when the action levels are exceeded;

the port district should continue the hydrogen sulfide sampling for the upcoming dredging seasons;

the port district, with the assistance of the other regulatory agencies, ensure the dredging is performed off shore and under water as much as possible to dissipate the hydrogen sulfide;

the harbor should post additional signs on the beaches, warning of possible health implications during dredging; the port district should create a better delineation around the discharge area;

the air district should start a policy where they archive their inspector notes; and

the dredging crew should indicate on their field notes when the operations on the beach are being conducted under emergency conditions or emergency variance.

The study did not evaluate other contaminants that might have been in the dredged material. However, it did note that, "Community members were concerned about the contents of the dredging when it originates from the upper harbor. They say this dredged material is black, and they are concerned about exposure to chemicals such as pesticides, heavy metals, and chlordane. "

Potential Impacts of Exposure to Multiple Contaminants

Exhibit 6 A-3-MRB-11-001 71 of 363 The USACE's tests of Morro Bay sediments indicated that most of the contaminants evaluated were within safe limits, but is this a guarantee that the tested contaminants pose no hazards to humans and wildlife? In their study, "Geographical Distribution and Potential for Adverse Biological Effects of Selected Trace Elements and Organic Compounds in Streambed Sediment in the Connecticut, Housatonic, and Thames River Basins." Robert F. Breault and Sandra L. Harris stated, "The presence of multiple contaminants is important for the assessment of the toxicity of the sediment, or of the water from which they are collected because of possible synergistic effects among the contaminants. Synergistic effects could cause a combination of contaminants to be more toxic than any single contaminant."

The increased risk of illness as a result of exposure to multiple contaminants seems intuitively obvious, but another associated risk factor may not be. Bioaccumulation of toxins is a related problem of major concern to scientists and health professionals. As defined by the International Union of Pure and Applied Chemistry, bioaccumulation is "Progressive increase in the amount of a substance in an organism or part of an organism which occurs because the rate of intake exceeds the organism's ability to remove the substance from the body." The manual, Evaluation of Dredged Material Proposed for Ocean Disposal Testing, published by the EPA and the USACE, defines bioaccumulation as "The accumulation of contaminants in the tissues of organisms through any route, including respiration, ingestion, or direct contact with contaminated sediment or water."

The manual also states that, "It is difficult to quantify either the ecological consequences of a given tissue. Concentration of a bioaccumulated contaminant or the consequences of that body burden to the animal. This manual does not provide quantitative guidance on interpreting the ecological meaning of the bioaccumulation observed. Instead, measured bioaccumulation is considered to be potentially unacceptable if animals exposed to the dredged material bioaccumulate statistically greater amounts of contaminants than do animals exposed to reference sediments."

As previously noted, lipophilic chemicals are the most difficult for the body to eliminate. With repeated exposures, the amount of a chemical contaminant in the body can increase. So, multiple exposures to a contaminant in a concentration considered safe could result in accumulation of an unsafe amount of the substance within the body. This contributes to the total "chemical body burden," described in Scientific American as the "presence of hazardous chemicals and their residues in humans".

A PBS report on body burden reveals some disturbing facts: "As part of a study of pollutant loads in the human body sponsored by the Mount Sinai School of Medicine in New York, samples of Bill Moyers' blood and urine were analyzed. Eighty-four distinct chemicals were found. His test results-much like a chemical fingerprint-revealed evidence of hazardous chemicals in common use-as well as compounds banned for more than a quarter century-and others so obscure that almost no public information is available to identify what products might have resulted in Moyers' exposure." As Many Questions as Answers

The PBS report also states that, "The health effects of chronic exposure to low levels of chemicals are only beginning to be studied." This, combined with the fact that testing protocols do not cover many potentially-harmful contaminants, leaves us with some critical questions for which there are no well-defined answers.

One of those questions is, "If we don't know exactly what's in it, and we don't know how exactly chemicals that might be in it can affect us, but we do know they may be very harmful ... is dredged material something we should be putting on our beaches?

The experience of Santa Cruz residents and visitors would seem to be a wake up call. What other toxins might have been emanating from the dredged material at Twin Lakes Beach, besides the hydrogen sulfide? What role, if any, did they play in the symptoms experienced by those exposed?

Until we do know exactly what is in the sediment dredged from our Harbor, and exactly what it can do to us, should it be treated as a form of hazardous waste? It might be easier and, from a financial standpoint, cheaper, to put it on the beach, but what is the potential cost in terms of our health?

Some are not inclined to wait until we find the answers to these questions before taking action. Steps recommended by residents include implementing protective measures to prevent the public from being exposed to dredged material and accelerating efforts to clean up the sources of the contaminants. Recommended steps include halting the use of sewage sludge for compost, fixing our leaky wastewater collection systems and replacing our inadequate wastewater treatment facilities with modern systems capable of dealing more effectively with chemical contaminants.

Exhibit 6 A-3-MRB-11-001 72 of 363

A-3-MRB-11-001

June 17, 2011

Dear Mr. Carl,

I wish to complain about the manner in which the Morro Bay-Cayucos Sanitary District (MBCSD) is gathering citizen input on their proposed WWTP project. As you are aware this project has generated numerous complaints and appeals mainly regarding appraisal of alternatives and community input. One of their responses has too been to schedule a "town meeting": to allow citizens to become informed on the project and make input. Their format is woefully inadequate in achieving this purpose. They have offered two two hour meetings that take place on consecutive days. They claim that they are offering two meetings but in fact they are two identical meetings, hence only one real meeting. Neither meeting is on a weekend which restricts participation. The short time between meetings does not allow time for assimilation of comments and two hours is not near enough time to present and discuss a project of this complexity. A previous town hall time meeting. I have forwarded this complaint to MBCSD but have yet to receive a response.

I believe that this is another effort by MBCSD to give the appearance of cooperation but is in fact an effort to limit input from parties that disagree with their approach.

Thank you for your consideration,

Alex Beattie aly Beattie 1805) 772-5694

Morro Bay



RECEIVED

JUN 2 0 2011

CALIFORNIA COASTAL C 13510N

From: Sent: To: Subject:

Linda Stedjee [Istedjee@charter.net] Friday, July 01, 2011 7:59 AM Madeline Cavalieri STRANGE new development regarding Morro Bay-Cayucos WWTP alternative site analysis

Hello,

I would like to share with you the latest, fascinating turn of events in the Morro Bay-Cayucos WWTP project. I think this is important enough to warrant an email communication rather than the usual letter. I will be communicating this to the Commissioners by letter within the next few days.

After the two WWTP alternative siting workshops, held June 27 and 28, Morro Bay City Attorney Rob Schultz appeared at the June 30 Morro Bay Business and Community Forum's regular meeting, and announced that what "caused all the delays, going back several years or more: it was Cayucos refusing to pay its share of the costs for a critical study of alternative sites for the new plant—the lack of which was instrumental in the Commission turning down the proposed project."

The quote is from a SLO Coast Journal article by Jack McCurdy. You can see it online at http://slocoastjournal.com/docs/fourth_estate/sham298.html

Residents are finding this more than a bit strange, and have already raised some questions, such as,

1. Why would the City send Schultze to the Business and Community Forum to drop this bombshell about the alleged REAL reason for the WWTP project delays and problems with the CCC? Is this a new way for the City to disseminate such a critical piece of information to the public? It appears to be unprecedented.

2. Why would the Morro Bay staff keep secret, for years, the CSD's refusal to pay up? Would they really let the project go to hell in a hand basket, over a period of years, because of CSD stinginess, and say nothing about it to anyone - as huge amounts of Morro Bay taxpayer money were wasted?

3. Did the Morro Bay staff ever tell the Morro Bay City Council that the staff could not do the CCC-required studies because of Cayucos? I do not remember any Council person ever mentioning that. I know some past Council people and one current one who would have been raising the roof, had they been given such information - and would NOT have let Cayucos derail our project

So, now you know what I know.

By the way, the New Times did an article on what happened at the second workshop. http://www.newtimesslo.com/news/6273/oh-ill-tell-you-where-to-put-it/ The public comment at both workshops was pretty negative overall in terms of views on the handling of the project so far - no surprise there. You will note (from my statement quoted in the article) that I was very diplomatic and restrained in making my own comments. ;-)

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 74 of 363

From:Colby Crotzer [colbyconcho@charter.net]Sent:Thursday, July 07, 2011 10:03 PMTo:Madeline CavalieriSubject:Morro Bay "Workshops" for Waste Water Treatment Plant site alternative analyses

I attempted to attend the workshop 7/29/2011 and when I arrived at 12:30, a full half hour before the notice said the public comment opportunity would close, I was turned away by the project manager saying "You are too late!" This is NOT an adequate (nor legal) way to solicit public comment. My city attorney attempted to apologize and commented that he simply had not thought that anyone else cared to speak. The electronic methods offered to submit comments don't appear to function, but I am not that computer literate, so it may be my lack of skills.

At any rate, I wanted to say that we must look at alternate sites for these facility, and choose one that is not along the shoreline nor in a floodplain.

Exhibit 6 A-3-MRB-11-001 75 of 363

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COASTAL COM AISSION

CENTRAL COAST AREA

Dear California Coastal Commissioners,

July 06, 2011

I am writing to provide you with information on some interesting developments in the Morro Bay-Cayucos wastewater treatment plant (WWTP) replacement project.

- 1. Summary of events at the WWTP workshops held to allow public input on alternative plant siting
- 2. Concerns regarding restrictions included in the contract with Dudek
- 3. Statements reportedly by the Morro Bay City Attorney regarding WWTP project
- 4. Serious allegations made against Wallace Group (Co-Project Manager) for Activities Elsewhere in the County

1. WWTP Workshops:

The workshops were held June 27 and 28. Both were held in Morro Bay. A Cayucos Sanitary District (CSD) staff member told a Morro Bay resident that the CSD was unable to secure a reservation at the Cayucos Veteran's hall, and thus could not hold a workshop in that town. The resident asked why the workshop could not have been held at the local school – the site of many public meetings in Cayucos. She received no answer.

Based on a rumor that there had been little effort made to inform Cayucos residents of the dates, times and location of the workshops in Morro Bay, a Morro Bay resident printed leaflets at her own expense, and managed to distribute them to about half the town. Those Cayucos residents who did appear at the workshop, and who were asked how they learned about it, cited those leaflets.

The workshops were fairly well attended. There were about 60 people at the first and about 40 at the second. Many residents spoke during the public comment period. There were many negative comments about the project thus far. A number of suggestions were made for alternative sites. A story published in the New Times (attached), titled, "Oh, I'll tell you where to put it", summarizes the reporter's view of the proceedings at the workshops.

The July issue of the SLO Coast Journal also contains an article (attached) that discusses workshop proceedings in more detail, and presents additional concerns.

2. Concerns Regarding Restrictions Stated in Contract with Dudek

Some of the material in the contract that the City and the CSD have made with Dudek, the firm that is to study alternative sites and water reclamation possibilities, is of concern to some residents. The contract includes the statement:

"The consultant shall prepare a preliminary water reclamation project analysis that relies upon the 1999 recycled water feasibility study. This preliminary analysis would be sufficient to address the Sustainable Use of Public Resources Component of the LCP for the proposed project and alternative sites (p to three total). The analysis will be based on the updated assessment of potential demand for reclaimed water prepared under Phase I above and the various issues and benefits associated with implementing a water reclamation program, including the feasibility of constructing infrastructure to accommodate a water reclamation program. Potential reclaimed water projects will be focused on irrigation and industrial uses. The conclusions of previous studies relative to groundwater basin recharge and potential benefits to stream habitats and water supply will be reviewed and summarized in the analysis. The analysis will summarize potential revenue generation and impacts of salt/nutrient loading on a potential reclaimed water program. Recycled water quality is understood to be insignificantly different from the 1999 study and further evaluation is not expected to be necessary. Commentary will be provided on the recycled water quality relative to agricultural uses – the city will furnish recent water quality analysis for Consultant's reference."

Several residents have reviewed the 1999 study that is referred to in the contract. Titled, "Comprehensive Recycled Water Study, City of Morro Bay and Cayucos Sanitary District", the study (which is available on the City of Morro Bay Web site, has been deemed by more than one resident to be obsolete, and at least one has stated the opinion that the study appears to have been done for the specific purpose of giving the City and the CSD excuses not to reuse water. Some of the "facts" in the study have been questioned and/or found to be no longer true and/or no longer applicable due to recent events and current plans.

For example, the 1999 study's Executive Summary includes the following statements:

Exhibit 6 A-3-MRB-11-001 76 of 363

- Ocean monitoring over the last decade has shown no negative environmental impact associated with discharge
- Current operation of the WWTP maximizes overall treatment performance and ensures highest quality effluent
 possible is being discharged
- Implementation of reuse project will require upgrading entire wastewater flow to secondary treatment
- Implementation of reuse project will require portion of wastewater flow going to reuse be upgraded to tertiary treatment

In addition, it is stated that (as of 1999) current water supply is sufficient to meet demand, although it might not be so in the future. That future has arrived, as was obvious during 2010 when the State Water Project drastically cut Morro Bay's water "ration", forcing the City to scramble to meet basic water supply needs.

The study also cites alleged problems with complex legal requirements affecting water reclamation and reuse. It cites a draft version of Title 22 law, much of which appears to be out of date. That conclusion is based upon a quick review of the draft version cited by and attached to the 1999 study, and of the current law.

There are also apparently-conflicting statements within the study itself. Under the heading, "Groundwater Recharge Summary", the study says,

"The alluvial groundwater basins are not suitable for groundwater recharge using treated effluent under Projects I-IV defined in the Guidelines. The flood plain areas overlying the groundwater basins are underlain by soils which are known to have low permeabilities and would not readily percolate the treated effluent via percolation points. The alluvial deposits have very limited capacities to store recharged treated effluent even should there be a site where recharge could occur. Available groundwater storage would occur only during dry portions of drought years. Generally, wells are present at intervals along these valleys which are too short to maintain the guideline set-backs from treated effluent recharge to potable wells. Sea water intrusion barrier wells would not be appropriate because of the well set-back guidelines. Some areas which have experienced sea water intrusion in the past are not expected to see intrusion in the near future due to reduced pumpage of wells resulting from the availability of Coastal Aqueduct water".

Yet, within the same study it is stated, "currently, the basins are naturally recharged by percolation of runoff and precipitation..."

With regard to the well setbacks to which the 1999 study refers, the Morro and Chorro Valleys are rather sparsely populated. As you know, current law, as stated in regulation 60310, requires that,

(a) No irrigation with disinfected tertiary recycled water shall take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:

(1) A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.
(2) The well contains an annular seal that extends from the surface into the aquitard.

(3) The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities

(4) The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.

(5) The owner of the well approves of the elimination of the buffer zone requirement.

(b) No impoundment of disinfected tertiary recycled water shall occur within 100 feet of any domestic water supply well.

There should be absolutely no problem finding places tin the Morro and Chorro basins to recharge groundwater - without coming within 50, or even 100 feet of a domestic well.

In conclusion, some residents believe it is clear that there are serious concerns associated with instructing consultants to base their water reclamation analysis on an outdated study that makes statements and draws conclusions such as those discussed above.

Exhibit 6 A-3-MRB-11-001 77 of 363

3. Statements Reportedly Made by Morro Bay City Attorney Regarding WWTP Project

According to a story (attached) from a local online news source, at the June 30 meeting of the Morro Bay Business and Community Forum, Morro Bay City Attorney Rob Schultz made statements that appeared to indicate that the Cayucos Sanitary District was to blame for some major problems in the WWTP replacement project - because the District refused to pay its share of costs. The news story, by Jack McCurdy, reports that,

"City Attorney Rob Schultz has revealed what he says caused all the delays, going back several years or more: it was Cayucos refusing to pay its share of the costs for a critical study of alternative sites for the new plant—the lack of which was instrumental in the Commission turning down the proposed project.

He says by submitting an incomplete project—without that study—Morro Bay got the Coastal Commission to explicitly require the study, which it has and which now means that Cayucos will have to pay its share of about \$350,000 for a consultant to conduct the study. Dudek, an environmental and engineering firm, was hired on June 1 to conduct that study and much more."

The story also states that,

"Schultz told the Journal that Cayucos balked at paying its share of studies of alternative sites for the new plant because it didn't want to pay for the cost and that was because it was satisfied with the plant being proposed next to the existing plant on Atascadero Road fronting on Estero Bay.

Cayucos apparently thought that would be the cheapest, although ultimately unacceptable. That location was submitted to the Coastal Commission and rejected after Commission staff found that it could not be located in that area because of potential flooding and tsunamis, which the city's own Local Coastal Plan prohibits, among other reasons."

Story author McCurdy, who was present at the meeting where Schultz is reported to have made the comments, is a veteran L.A. Times news reporter now retired (at least from the Times). He obviously has a great deal of experience documenting and reporting information. I have communicated with two other Morro Bay residents who were present at the meeting. Both confirmed that they also heard Schultz' comments. However, there is some controversy over what was actually said.

Some residents who were present at the meeting and others who read the story began to question why Morro Bay City staff did not call to the City Council's attention the fact that Cayucos' unwillingness to pay up was negatively impacting the project. They also asked if Cayucos had ever been formally been put on notice that this was the case. I submitted a Public Records Act request to the City of Morro Bay, requesting any and all documentation that would show that those actions had been taken.

In response to my inquiries, Mr. Schultz made a number of comments, including these"

"I referenced two studies that CSD did not participate in or make payment for. They were the Chorro Valley Alternatives Study and the WWTP Space Needs Assessment Study."

And

"... the CSD did not participate in or make payment for the Chorro Valley Alternatives Study. The Chorro Valley Alternatives Study was then used in the analysis for the DEIR. The City is still of the opinion that the CSD should have paid for its share of the study since it was used in the analysis for the DEIR. However, I want to make it perfectly clear that the CSD's non-participation and non-payment for the Chorro Valley study did not impact the WWTP upgrade/replacement project."

I believe that all this may be of interest to you because it might be indicative of a potential split between Morro Bay and Cayucos. There have allegedly been indications in the past that Cayucos might decide to break with Morro Bay and build its own plant.

It has also been suggested that if that occurred, Morro Bay staff and some Council members might then claim that the City could not afford to move the new plant to a new location, and would have to keep it in their currently-favored location – the one that has been rejected by the Planning Commission and found seriously deficient by CCC staff. Many

Exhibit 6 A-3-MRB-11-001 78 of 363 residents, however, believe that the sale of the beachfront land where the staff currently wants the plant, and the use of the already-complete design for a PERC plant (which was done at PERC's own expense) would ensure that the City could afford to "go it alone" with a new plant at a much more suitable location than the one the staff has so insistently supported.

4. Serious Allegations Made Against Wallace (Co-Project Manager) for Activities Elsewhere in the County

Wallace Group currently co-manages the Morro Bay-Cayucos WWTP replacement project. The other manager is Dennis Delzeit.

The San Luis Obispo County Grand Jury recently found that John Wallace, head of the Wallace group has a conflict of interest in his role in the South County Sanitation District, which lies within San Luis Obispo County. Now, the SWRCB has found that Wallace is responsible for some major operations problems at the Oceano WWTP. Initial accusations against Wallace surfaced some months ago in several Cal Coast News stories. A recent story from that publication (attached) summarizes the South County Sanitation District issues that have thus far been reported.

Thank you for your time and attention. I believe that the CCC's intervention and guidance are critical to the Morro Bay – Cayucos WWTP project, and that without you, the project would end up being a disaster for the environment and for residents. About a million dollars has been spent so far, and we have absolutely nothing of value to show for it. Only the hired consultants seem to have benefitted from all that money.

Sincerely,

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442 Istedjee@charter.net

cc: Madeline Cavalieri

Exhibit 6 A-3-MRB-11-001 79 of 363 From the June 29, 2011 issue of the New Times http://www.newtimesslo.com/news/6273/oh-ill-tell-you-where-to-put-it/

Oh, I'll tell you where to put it

BY COLIN RIGLEY

A woman eyed one of half a dozen poster-board displays perched in the Morro Bay Veteran's Memorial Building.

"I'm confused," she told the man overseeing that particular station. "What do these pluses mean?"

The man responded: "The pluses have no significance."

The woman was trying to make sense of a poster that outlined potential sites for a new sewage treatment plant and the potential problems with each site. However, such problems were marked with a plus sign, almost making it seem as if the current preferred project site had the least amount of issues. But the reality is that site has a lot of hurdles to overcome.

This was just one scene that unfolded as Morro Bay and Cayucos residents attended a two-day workshop to discuss alternative sites for a planned Morro Bay/Cayucos sewer treatment plant upgrade.

The two communities have been working to upgrade the current treatment plant under order from the Central Coast Regional Water Quality Control Board. Early this year, the project was appealed to the California Coastal Commission and accepted mainly due to an inadequate review of alternative sites, according to commission staff. As designed, the project lies in a 100-year flood zone and Coastal Commission staff, commissioners, and local residents have complained that project officials didn't explore enough site options.

In response, local officials from Morro Bay, Cayucos, and Dennis Delzeit, a consultant acting as project manager, hired Santa Barbara engineering firm Dudek to perform the alternative sites analysis. Dudek has

so far outlined eight potential alternative sites and is in the process of determining whether those sites have any "fatal flaws," provide the potential to recharge groundwater levels, and are properly zoned for a treatment plant.

The workshop held on June 27 and 28 was the first step in a three-phase analysis. The next phase will be a "fine screening" of the alternative sites, followed by a final proposal to be presented before the Coastal Commission, likely sometime in spring of 2012.

Resident Linda Stedjee called the current site "a site that is so utterly and ridiculously unsuitable that it seems they couldn't find a worse one if they tried."

Though the workshop is very preliminary, residents on the second day highlighted a plot of land owned by Chevron as a better alternative to the current site.

If the current site is rejected by the Coastal Commission, the design would go back to the drawing board after about \$1 million has been spent toward the estimated \$34-million project.

Questions Still Mark Proposed Wastewater Treatment Plant

by Jack McCurdy

<u>Synopsis</u>: Morro Bay and Cayucos have a new consultant hired to develop a new wastewater treatment plant plan after the previous one was rejected by the California Coastal Commission earlier this year because it failed to meet local and state requirements. Whether the new plan will win approval is still far from uncertain, but two public workshops on the consultant's work plan indicated a faltering start.

When Morro Bay and Cayucos, partners in the building of a much-debated new wastewater treatment plant, hired a consultant on June 1 with the apparent goal of developing a project that the California Coastal Commission would accept, there was an overriding question: have Morro Bay and Cayucos now left behind the failed and wasteful/costly plans of the past and decided to pursue what the Commission staff has made clear is required?

That question still seems unanswered.

Those requirements, stated in two letters from the Commission staff in 2008 and last year (See <u>Slo Coast</u> <u>Journal - November / 2010</u>), include examining a variety of possible sites for the new plant and seriously considering building a new plant capable of producing large quantities of disinfected water to recharge depleted city wells in order to save ratepayers money and get away from very costly and potentially unreliable state water supplies.

Despite those Commission staff letters to the Morro Bay City Council and the Cayucos Sanitary District Board (MB/CSD), neither of which is posted among numerous documents on the city's wastewater treatment plant site, the partners submitted a project to the Commission that only considered one site for a new plant—next to the old, existing plant on Atascadero Road near Estero Bay—and one that would only produce a limited amount of recycled water. The Commission rejected the project and asked for a revised plan to meet staff requirements.

At two community workshops held on June 27 and 28, there seemed to be a glimmer of hope that Morro Bay and Cayucos—who operate and will build a new plant under their Joint Powers Agreement—might be ready to produce what the Commission staff requires. The staff of the new consultant, Dudek, an environmental and engineering firm, who helped conduct the workshops, appeared to be open to ideas not reflected in the failed project. (The deadline for public comments following the workshops has been extended to July 15. They can be submitted to the city or the Cayucos district by letter or on line at Morro Bay Civic Plus / Forms. The link for comments on postcards mailed to residents announcing the workshops is apparently incorrect.)

Dudek's scope of work for the project states that 10 sites for the new plant will be screened and three will be selected—including the one that was rejected by the Commission—for final review and selection of one. But at the workshops, April Weincki, Dudek's manager for the project, said the search for a proposed site would not be limited to 10 and that the final review list would not be limited to three. It would depend, she said, on how many others are proposed by residents and others that could qualify under the city's Local Coastal Plan and the California Coastal Act.

But, it turned out, the Scope of Work, which describes in detail what Dudek will do and what the goals are, along with a great deal of descriptive information about the project planning, was not made available to the

Exhibit 6 A-3-MRB-11-001 81 of 363 public prior to the workshops. Therefore, interested residents were not given opportunities to become knowledgeable about the issues to be discussed at the workshops. Not only could that have affected comments of residents at the workshops but could have determined if they even wanted to attend.

The Scope of Work is in the <u>contract between Dudek and MB/CSD</u>, which shows it was signed on June 1. But it was only made available shortly before the June 27 evening meeting through a single request. Being 16 pages, even those who were given copies might not have had time to read it in time for that evening workshop or even the workshop the next day at 11 a.m.

What was provided on a display board at the workshops was a sheet titled "Dudek Work Plan" (See Morro Bay <u>Civic Plus.PDF</u>) containing a series of panels that featured labels of highlights apparently from the Scope of Work. But the Work Plan shown at the workshops was not provided in handouts to be studied for developing comments. And that Work Plan had not been posted at the link to the "Wastewater Treatment Plant Upgrade Project" on the city's web site prior to the first workshop. It was posted after a request was made at the first workshop to have it made available on the site.

But not the much more extensive and detailed Scope of Work, which is not publicly available elsewhere.

Questions also were raised about scheduling workshops back to back. The city did mail postcards (the city said they were mailed to all Morro Bay as well as Cayucos residents). But some felt being back to back discouraged people from attending both, even though different information and comments could have been available at the two. Placing them a few days or a week apart almost might have provided more opportunities to study and reflect on the information and comments in order to develop new comments. A workshop of a weekend might have made it more available to some without time to attend on week days, some felt.

The Scope of Work also contains statements indicating that the project rejected by the Coastal Commission staff, in large part because it is flood and tsunami zones, will still be considered and receive a lot of attention in the Dudek analysis and recommendations. "...additional analysis may confirm the proposed project site is appropriate for the project by demonstrating the proposed project is located and designed to avoid or minimize risks associated with coastal hazards," it says. The Commission staff requirements seemed to rule out a new plant in that location because it would be vulnerable to flooding and tsunamis.

The Scope of Work also raised questions and about feasibility of replenishing city wells with recycled water from a new plant, based on studies 12 or more years old, which some criticized as being outdated. Dudek said it could conduct a new water reclamation feasibility study, but it would add to the cost.

The one-year contract with Dudek is for \$345,485, plus \$49,100 for the optional upgraded water reclamation feasibility study and \$8,470 for visual simulations of potential new plant sites.

Residents told the workshops that the MB/CSD needed to get on with a project that is effective in producing what the communities need, is efficient and up to date in its operations, and will be built so it will last for many years. Jane Heath and Susan Mullen both expressed what many were expressing.

Heath, a Morro Bay resident, said "this project is the most expensive public improvement project most of us will ever contemplate in our lifetime, and it will take a lifetime to pay for it. That is why it is so critical that we get it right.

"We have a rare opportunity to reconsider the decisions made in the 1950's when the current plant was built. In those days, the sand dunes were referred to as wasteland or given away as a premium for buying property with 'real' value. If this was a project for a brand new municipality, the current site would not even be considered, for a lot of reasons, not least sea water rise, the flood plain, or the visual, olfactory and discharge impacts so close to the ocean."

-3-MRB-11-001 82 of 363 She urged MB/CSD to not limit inquiry into a pre-determined, small number of sites so the alternative options fail before they have a chance and to examine all possible sites equally without giving extra points to where the plant is now.

"Do not get hung-up on who owns alternative property, its current land use, or the likelihood of acquiring it the city and the JPA have options that include sale, trade, and concessions that can make a deal happen if a site is otherwise desirable," Heath said

She called on MB/CSD to work with the Coastal Commission and to not see them as the enemy. "They just want to see that the JPA is sincerely considering reasonable alternatives—and listening to citizens about what we want," she said.

"Let's not be penny wise and pound foolish," she said. "We know this plant could cost \$35 million. If doing this right means we pay a dollar or two a month more but we have on-site solids composting and treat the liquids so we can use that water for agriculture or to water parks, I'll gladly give you the extra two dollars. In contrast, though, I'll begrudge every nickel that builds a facility that might not even meet our needs until my neighbors' little ones graduate high school."

She urged the MB/CSD to "take what the Coastal Commission has told us and rather than lobby against it or try end runs around it, let's just do what we been asked to do: see if there could be a better place or way to do this and get a permit to build the right plant in the right place, that anticipates the needs of the future, not just does what seems convenient now."

Mullen, a former City Council member, said now is the time for this Council to think outside the box of 1950's technology and move to 2011. Our new waste water treatment plant needs to move inland into the Morro Valley and abandon the outfall, she said.

"It is time to stop dumping into the ocean! We can build a transfer station at the site of the existing plant and sell the remaining property to help finance the purchase of land in the Morro Valley," she said.

The water needs tertiary treatment (the highest type of recycled water) and then injected into the Morro Basin to help clean up the nitrates and turn back saltwater intrusion," Mullen said. This could also help with our Morro wells in times of drought and/or state water shut downs. This procedure has been done for years in Orange county and there is no reason why we shouldn't do the same.

"The plant needs to be built to sustainably operate such that the gases produced from processing waste will power the plant and thus reduce operating costs," she said. "We know this is being done at the plant in Santa Paula and we need to do the same here."

It will be very important to get designers and engineers who are experienced in current technologies in order to develop an affordable design that will serve our communities for many years to come at an affordable cost, Mullen said.

"Now is the time to release old ways of thinking," she said. "Now is the time to stop using consultants to lobby for these old ways and release engineering firms who do the same. Morro Bay and Cayucos need to lead the way and not follow like sheep being led to the slaughter. We cannot afford to do anything less than the above."

Exhibit 6 A-3-MRB-11-001 83 of 363

Morro Bay-Cayucos Wastewater Treatment Plant Delays: Were They A Sham?

by Jack McCurdy

<u>Synopsis</u>: The Morro Bay-Cayucos wastewater treatment plant saga has been marked by one thing: the unexplained and bewildering delays in getting the project built over the past several years and more. But now the real reason has been revealed: Cayucos has been refusing to pay some of the costs, Morro Bay's city attorney says.

Many who have followed the long-delayed plans to build a new Morro Bay-Cayucos wastewater treatment plant have been puzzled over the development of a multi-million dollar project that has dragged on for so long, pushed up costs, and ultimately seemed dead on arrival at the California Coastal Commission, which has the power to determine the kind of project that must be built. And, as was widely expected, the Commission did reject the project on March 11 in a few minutes with no debate.

It has all seemed so baffling and impossible to understand, especially since the Commission staff has sent Morro Bay and Cayucos two letters dating back to 2008 explaining exactly what kind of project would be acceptable and what kind of information was required to back it up.

Bewildering-until now.

City Attorney Rob Schultz has revealed what he says caused all the delays, going back several years or more: it was Cayucos refusing to pay its share of the costs for a critical study of alternative sites for the new plant—the lack of which was instrumental in the Commission turning down the proposed project.

He says by submitting an incomplete project—without that study—Morro Bay got the Coastal Commission to explicitly require the study, which it has and which now means that Cayucos will have to pay its share of about \$350,000 for a consultant to conduct the study. Dudek, an environmental and engineering firm, was hired on June 1 to conduct that study and much more.

The Morro Bay City Council and the Cayucos Sanitary District Governing Board (MB/CSD) are partners under a Joint Powers Agreement (JPA), which covers both operating the present plant and building a new one. A top Cayucos district staff member once said, "There is bad blood between the two."

"Is anybody in the room from Cayucos?" Schultz asked jokingly at the Morro Bay Business and Community Forum on June 30, according to several who were at the meeting. Then he disclosed the hidden goings on that has had so many wondering why the wastewater treatment plant (WWTP) has taken so long to get started and built.

Schultz told the Journal that Cayucos balked at paying its share of studies of alternative sites for the new plant because it didn't want to pay for the cost and that was because it was satisfied with the plant being proposed next to the existing plant on Atascadero Road fronting on Estero Bay.

Cayucos apparently thought that would be the cheapest, although ultimately unacceptable. That location was submitted to the Coastal Commission and rejected after Commission staff found that it could not be located in

Exhibit 6 A-3-MRB-11-001 84 of 363 that area because of potential flooding and tsunamis, which the city's own Local Coastal Plan prohibits, among other reasons.

The city apparently went along and submitted that site for the new plant.

The Cayucos board or staff never put their refusal to pay its share in writing, but it was made clear in other ways, he said.

Schultz said a similar situation occurred in 1999 when an alternatives study was needed and Cayucos refused to pay its share. "We did it on our own," he said. And there have been other times when Cayucos wouldn't pay it share, Schultz said.

"We hear all the time that we (Morro Bay and Cayucos) should have done the project a year ago," Schultz said. "But we will get there."

Under the JPA, if the city required the alternatives study for the project, "we would have had to pay for it ourselves."

The Coastal Commission staff has strongly urged MB/CSD in the last letter to them in November, 2010, to build a plant with the capability of producing disinfected water from all of the effluent it takes in for replenishing depleted city wells and for agricultural needs. But whether Cayucos will pay its share of the cost of designing a plant with that capacity is unknown, if the Commission doesn't explicitly require it, Schultz said. That is because Cayucos has its own private supplies of water and thinks it doesn't need any recycled water. Board chair Robert Enns has said so at JPA meetings.

That may be a decision of the Central Coast Regional Water Quality Control Board, which could have the authority over the grade of water that the plant must provide, Schultz.

"We might have to pay to recycle all by ourselves," Schultz said, referring to Morro Bay.

The two JPA partners started having their attorneys revise their agreement last year. Schultz said it is mainly because the document is so old. But there may be conflicts that need to resolved as well. There have been no JPA meetings on the revision for many months.

Schultz said it is not out of the question whether Cayucos might decide to seek to build its own WWTP, if an agreement sharing costs of all kinds cannot be worked out by both sides in the new JPA.

"Well, at least we don't have a gun to our head any more," he said, referring to the city pursing a new WWTP that was sure to fail.

Exhibit 6 A-3-MRB-11-001 85 of 363

Wallace found responsible for sewage plant deficiencies

July 5, 2011

By KAREN VELIE

Penalties against the chief operator at the south San Luis Obispo County sewage plant for failing to properly oversee the treatment facility have been reduced following an appeal that blamed administrator John Wallace for much of the plant's problems.

Following reports by several employees that the chief plant operator and the administrator at the South San Luis Obispo County Sanitation District were failing to follow state and federal laws in place to protect the environment, the state issued the plant a notice of violation in July 2010.

In January, the State Water Resource Control Board determined Jeff Appleton, South San Luis Obispo County Sanitation District's chief plant operator, operated the plant "using fraud and deception," according to a letter of proposed disciplinary action.

Specifically, the state found Appleton had failed to update the operations manual, keep required records and had ordered staff to dump samples that showed the plant was not in compliance.

The state proposed that Appleton's plant operator certificate be downgraded, which would have made him ineligible to manage the plant.

Appleton appealed, claiming that Wallace refused to allow him to update the operations manual because it was "too expensive." The manual provides directives in case of emergencies and is required by law to be updated when the plant is modified.

The manual, written in 1992, did not describe operating procedures for the chlorine tanks or the effluent pumping stations which installed after 1992.

In the state's response to Appleton's appeal, it says that emails provide evidence that in 2004, 2007 and 2009, Wallace was informed of problems with operating procedures but refused to fund the cost of updating procedures until the state issued a notice of violation against the plant in July 2010.

"While having an outdated and incomplete operating manual no doubt made it more difficult for the operators to perform their duties, it appears that you took reasonable steps to inform your superiors of the need to update it," the state says in its response to Appleton's appeal. "Although you might be faulted for not pursuing more forcefully the funds to update the operating manual, your responsibilities as the chief plant operator was to operate the facility and ensure that your subordinates performed their operational duties correctly.

"You did not have an obligation to perform engineering work for which you were not qualified."

Wallace is the chief administrator of the district, which provides services to about 38,000 customers in Arroyo Grande, Grover Beach and Oceano. He is also owner and president of the Wallace Group, a private engineering consulting firm located in San Luis Obispo that receives about \$50,000 to \$80,000 a month for plant administration and engineering services.

Exhibit 6 A-3-MRB-11-001 86 of 363 In June, the San Luis Obispo County Grand Jury validated allegations that Wallace as the plant administrator has been funneling millions of dollars to his private engineering company without proper oversight and that a conflict of interest exists because Wallace is the plant administrator while his firm retains the engineering contract.

The Grand Jury recommended that the sanitation district board consider hiring a new administrator and that the county auditing division should consider doing an audit.

In July 2010, a few days after the state hit the plant with a notice of violation, Appleton applied for stress leave. He went back to work in the early part of December 2010.

On December 18, as the result of influent pump failures, as much as 3 million gallons of raw sewage was dumped into Oceano neighborhoods, beaches and the Pacific Ocean.

In January, the state proposed disciplinary action against Appleton which would have resulted in a one year downgrading of his operator's license.

A few days later Appleton again applied for sick leave.

As a result of Appleton's appeal, the state reversed its decision to modify Appleton's license and instead issued a letter or reprimand. The state found Appleton had willfully or neglectfully violated sampling procedures.

Appleton has 30 days to object to the state water board's decision.

Meanwhile, the district was served another notice of violation in May because of the December spill. Wallace responded to the violation last month and is awaiting the state's response which could include fines of up to \$30 million that would fall on the communities and the rate payers.

If the state determines Wallace failed to accurately respond to the mandated report he could face criminal action, according to the notice.

At an Oceano Community Service District Board meeting, Wallace said he expects the state to level fines and that the district along with the communities would be responsible for covering the costs.

In addition, the district is battling lawsuits from two former employees who claim they were fired for whistle blowing. According to the July 6 agenda, the district is slated to discuss a liability claim by Appleton against the district in closed session. Last month, on top of fees paid to Wallace, the Wallace Group and the sewage district's attorney, the district reimbursed Wallace \$12,522 for legal fees he paid to the San Luis Obispo-based attorney firm Andre, Morris and Buttery for legal fees for battling lawsuits.

> Exhibit 6 A-3-MRB-11-001 87 of 363

From: Richard E.T. Sadowski [r.e.t.sadowski@gmail.com]

Sent: Tuesday, July 12, 2011 12:54 PM

To: Madeline Cavalieri; Dan Carl

Subject: Morro Bay / Cayucos WWTP Project

July 12, 2011 Dear Ms. Cavalieri and Mr.Carl:

First and foremost thank you for all your hard work in protecting our precious California coastlines.

I would like to share with you some information and ideas that I believe will help ensure a successful wastewater treatment plant project for Morro Bay and Cayucos. I have considerable experience in dealing with wastewater collection systems, and have been active in community efforts to get our wastewater treatment plant project on the right track.

I have been involved with the Morro Bay/Cayucos WWTP (MB/CAY WWTP) project since 2003 and would like to give you both a short account of my experience and involvement with this project.

I was employed by the Cayucos Sanitary District (CSD) between February 2003 and November 2004 as Maintenance and Operations Supervisor for the sewer collections system. During my employment I worked with CCC staff on the Lift Station #2 project, Lift station #4 force main project and other minor projects in the CSD's sphere of influence.

In December of 2003, San Luis Obispo County experienced a large earthquake that was centered in San Simeon, for which the Governor issued a State of Emergency. I along with my co-worker, Mr.Vincent Novoa, made an assessment of liquefaction damage to the CSD's sewer collection system from the earthquake. We were able to secure FEMA and State OES (Office of Emergency Services) funding for sewer infrastructure repair for earthquake related liquefaction damage to the sewer mains . Our investigation consisted of TVing (video taping) numerous miles of the collection systems . What our investigation also revealed was that the sewer collection system was is a dire state not just from this one earthquake, but also from the long standing problems related to a failed storm water runoff policy. The lack of any meaningful storm water management has resulted in severe I&I (Inflow and Infiltration) problems that contribute to surcharging events at the MB/CAY WWTP.

Due to the fact that a large percentage of the residences in Cayucos are vacation rentals, peak dry weather flows can vary up to 4 times the daily average at peak tourist times. When addressing capacity issues for the new WWTP, these variables must be factored in.

Another issue that continues to be ignored is the severe H2S (sewer gas) venting problem from the CSD's primary gravity sewer main. The CSD's final Lift Station #5, has two force mains that discharge to a large gravity sewer main that originates in North Morro Bay and continues southbound along North Main Street to Hwy. 41 where it eventually heads west toward the existing WWTP. Test data showed extremely high levels of H2S gas venting through the manholes. This issue has contributed to the deterioration of the condition to the manholes, especially north of Alva Paul creek where the H2S venting is severe. In 2004, we experimented with Manhole Biofilters to reduce the odors with limited success.

In April 2008, I co-authored a report, The Morro Basin Nitrate Study, Issues and Concerns. In this report we concluded that the high nitrate levels in the Morro Basin drinking water aquifer are more likely coming from exfiltrating sewage than from nearby farms as city staff asserts. The CSD's main sewer line mentioned above is just one of the sewer mains that lies in the Morro Basin aquifer. Copies of this report were given to Morro Bay City Attorney, Morro Bay Public

Exhibit 6 A-3-MRB-11-001 88 of 363 Works staff, SLO County Supervisor Gibson, CCC staff, CCRWQCB staff, OPC staff and others.

Based on some of the issues and concerns stated above, I believe that relocating the MB/CAY WWTP to an area near the CSD's final Lift Station #5, or on the Estero Bay Chevron property at Toro Creek, makes the most environmental and economic sense for the following reasons:

(Note: CSD's

Lift Station #5 is located within the city limits)

* Eliminates the need to transport all of Cayucos's sewage through North Morro Bay, eliminating the H2S issues that plague the citizens of North Morro Bay.

* Addresses Sea Level Rise (SLR) and Climate Change, hence opening up opportunities for Federal ARRA (American Recovery and Reinvestment) Grants and other federal and state grants that are available for "Green" projects that use the latest technology to address the challenges that we face along our coastlines.

* Many of the necessary sewer easements are already in place, including Morro Bay's ocean easement located along the shoreline west of the Chevron Estero Bay terminal. This easement could serve as an emergency SSO in the event of a catastrophic failure for the new MB/CAY WWTP.

* By using renewable energy sources, for example wind and methane capture, the added energy consumption to deliver Morro Bay's sewage could be mitigated.

* Protects the Morro Bay's drinking water aquifer from exfiltrating sewage.

* Water reclamation and AG exchange could be efficiently be done with local farms near Toro Creek

In order to address the environmental issues that we are faced with today in the 21st Century, such as Sea Level Rise, Drought and Climate Change to name a few, public works projects must integrate solutions to these challenges.

Richard E.T.Sadowski

Exhibit 6 A-3-MRB-11-001 89 of 363

From:Jack McCurdy [jack.mcc@att.net]Sent:Friday, July 15, 2011 11:44 AMTo:Madeline Cavalieri; Dan CarlSubject:Workshops

Hi Madeline and Dan,

Are there any criteria in the Coastal Act, CEQA or any other document relevant to Commission procedures that guide the structure and requirements of public workshops to ensure they meet minimum standards to provide opportunities for legitimate public involvement? Most of the definitions of workshop I found online had two things in common in defining workshops: interaction and discussion involving the group in attendance.

I am aware that your staff urged the JPA members to hold "several" workshops on their proposed plans to address the process for responding to the substantial issues identified by the Coastal Commission with respect to the WWTP application, particularly a review of alternative sites for a new plant. My interest is in seeing if there are any bases for identifying what constitutes an acceptable workshop.

Thanks, Jack

From: Jack McCurdy [jack.mcc@att.net]

Sent: Friday, July 15, 2011 2:48 PM

To: Madeline Cavalieri

Subject: My comments on MB/CSD workshops

Two public workshops were held by the city of Morro Bay and the Cayucos Sanitary District on June 27 and 28 in Morro Bay "to receive comments on the proposed Wastewater Treatment Plant (WWTP) Upgrade Project alternatives analysis process, candidate evaluation criteria, and preliminary site identification," according to the city's web site (<u>http://ca-morrobay.civicplus.com/index.aspx?nid=352</u>), and a postcard the city staff said was mailed to all households in Morro Bay and Cayucos including the same information.

These workshops contained deficiencies that deprived residents of invaluable facts that would have enabled them to be significantly more informed and thereby much more capable of raising questions that needed to be answered before making their comments on the issues at hand. The workshops that were conducted were superficial in what they offered residents invited to make comments, compared to the abundance of significant information that could have easily been made available--and still has not been.

The key word in the notice of the workshops is "process"--in other words, how the project alternatives analysis is planned to be carried out and, more broadly, how the substantial issues found on March 11, 2011, by the Coastal Commission with the WWTP project submitted to the Commission by the city of Morro Bay and the Cayucos Sanitary District will be addressed. Candidate evaluation criteria and preliminary site identification are facts. But they are only part of the process to develop and evaluate those facts. It seems obvious that people need to know how that process will function in order to have any expectation of understanding how those substantial issues are to be overcome.

There was a ready-made and ideal way to inform residents about that process so they could be very well prepared for the workshops. A 16-page Scope of Work was developed and submitted to the city and Cayucos as part the contract signed by the Dudek engineering firm and Morro Bay mayor Bill Yates and Cayucos Sanitary District board president Robert Enns on June 1, 2011, identifying Dudek as the consultant for designing a plan to address the substantial issues and, as the Scope of Work states, to "prepare a policy consistency analysis for all CCA (California Coastal Act) and LCP (Local Coastal Plan) policies, potentially applicable to the proposed project. The CCA and LCP consistency analysis will include close coordination with the City and MBCSD to identify options and opportunities for addressing and resolving potential policy conflicts, including design options, project phasing, and mitigation." It seems undeniable that this Scope of Work lays out the process that the city and Cayucos Sanitary District are committed to and engaged in and is the appropriate subject for the workshops--as defined by that very detailed and comprehensive Scope of Work. (It is available as part of the Dudek contract online

at http://www.slocoastjournal.com/files/2011/july/agr.Dudek.110601.pdf, or in the attachment below.)

But neither the city nor the Cayucos Sanitary District made the Scope of Work available to the public before the workshops--and still haven't. It was made available on one request but only a few hours before the first workshop on June 27, despite the fact that the same request had been made initially on June 13 and again on June 20 to the city staff.

Instead of allowing the Scope of Work to be publicly available in advance of the workshops in order to provide the depth and scope of information that could have prepared residents for more effective participation in the workshops, they were held and structured with four work stations identified as:

Station 1. Alternative Sites Identification/ Candidate Rough Screening Criteria Station 2. Coastal Commission Appeals Process & Environmental/Local Coastal Program Policy Consistency Station 3. Logistics/ Site Constraints

Station 4. Water Reclamation Feasibility

The materials and information provided by city and Cayucos Sanitary District staff members at those work stations compared unfavorably in content and in terms of the most current information about the process underway, the process being the subject of the workshops. (See the work stations model at <u>http://ca-</u>

morrobay.civicplus.com/documents/Public%20Services/Wastewater%20Treatment%20Plant/WWTP% 20Upgrade/Alternative%20Analysis%20Workshop%20Information%20Stations.PDF.) There was one partial exception. Station 2 was hosted by the Dudek project manager, who displayed a poster with boxes containing bulletpoint-type headings that reflected the Scope of Work. (http://ca-morrobay.civicplus.com/documents/Public% 20Services/Wastewater%20Treatment%20Plant/WWTP%20Upgrade/Coastal%20Commission%20Approval% 20Process%20Work%20Plan.PDF) But they were small, brief and lacked the breadth of information in the Scope of Work itself.

> Exhibit 6 A-3-MRB-11-001 91 of 363

The Dudek project manager and several others hosting the work stations delivered comments to the workshops audiences, but they were brief and did not discuss the process extensively or the Scope of Work at all. They added little, if anything, to the information and materials at the work stations.

In addition, the city's website and the postcards invited and encouraged any person or agency to make comments on the subject (see first paragraph) and provided links to pages where those comments could be made online. However, on the postcard, the link (http://www.morrobay.ca.us/wwtpupgrade) was dysfunctional and did not access the comments page. Then, the link from the city's WWTP website page (http://ca-morrobay.civicplus.com/index.aspx? nid=-404&badlink=%2Fforms.aspx%3FFID%3D66) to the comments page also failed. City staff was informed and said it is was corrected. It is now at http://ca-morrobay.civicplus.com/forms.aspx?FID=67. These failures raise a question of whether any one or a significant number of residents were discouraged from making comments. As a practical matter, most Morro Bay residents would be likely to file comments online. The potential barriers to filing comments should be kept in mind when assessing the interest of residents based on the number of comments submitted. Questions also have been raised about scheduling workshops back to back on a Monday night and the following Tuesday morning. Back to back workshops may have discouraged people from attending both, even though different information and comments could have been available at the two. Placing them a few days or a week apart might have provided more time and opportunities to study and reflect on the information at the initial workshop in order to develop new comments at the second session. A workshop on a weekend might have made it more available to some without time to attend on week days.

These comments are focused on the workshops as a means to engage residents in evaluating the process under way, a critical requirement at this stage of the process. But the content of the Scope of Work also should be reviewed in terms of whether its goals and tasks are consistent with Dudek's assignment and commitment to "prepare a policy consistency analysis for all CCA (California Coastal Act) and LCP (Local Coastal Plan) policies, potentially applicable to the proposed project" being undertaken by the city and Cayucos Sanitary District board.

Therefore, the Scope of Work should have been and still should be the subject of workshops. And to correct the failure to do so, additional workshops are necessary to provide residents with opportunities to understand, question and comment on the actual process that is underway, not on what has already taken place, the various relevant facts such as which alternative sites are under review (which is widely available) and the plan that the consultant <u>may</u> develop to meet its contractual responsibilities. All that borders on the speculative, as demonstrated by the fact that there is a Scope of Work that is not only agreed upon under a signed contract but one that is guided by a timeline based on a "project schedule (that) reflects the expectation that Coastal Commission staff will decide to docket the proposed project at the next available local hearing in Santa Cruz, with a follow-up hearing, if necessary, scheduled in nearby Santa Barbara."

These are concrete plans reflecting contractual tasks that the public should have been provided an opportunity to become aware of before any substantive discussion of the process to develop a new WWTP project proposal was scheduled in workshops. Clearly, residents were not afforded the essential information that they needed, deserved and could have been provided prior to the June 27 and 28 workshops, which leaves those workshops inadequate and unacceptable as meetings to involve residents in a meaningful way. And the barriers erected to making comments by the failure of the only two links available to submit comments add significantly to the unacceptability of the workshops as conducted. As a result there have been no workshops that meet any reasonable criteria of what a workshop should represent and accomplish. Therefore, workshops still should be scheduled after the Scope of Work is provided to the community in a manner that draws public attention to its availability. Otherwise, the requirements of the Coastal Commission staff for the city and Cayucos Sanitary District board to conduct several workshops have not been met in any reasonable and fulfilling way.

Jack McCurdy

Exhibit 6 A-3-MRB-11-001 92 of 363

From:	Jack McCurdy [jack.mcc@att.net]
Sent:	Friday, July 15, 2011 4:49 PM
То:	Madeline Cavalieri
Subject:	Addition to my comments on WWTP workshops

This paragraph has been submitted to the city as an addition to my previous comments. It would become the last paragraph.

Jack

The Scope of Work calls for a third workshop on the "...criteria for a fine screening analysis of the three feasible alternative sites, including the proposed project site" to be held at an unspecified future date. But such a workshop can only serve to potentially compensate for the shortcomings of the previous two workshops described above, if it is open to comments on all subjects related to the project and if the Scope of Work is made available in advance and the availability is made known effectively to the public.

From:	Linda Stedjee [Istedjee@charter.net]
Sent:	Tuesday, July 19, 2011 10:51 AM
То:	Madeline Cavalieri
Subject:	Morro Bay-Cayucos WWTP - could this help ensure that the new WWTP provides for water reclamation?

Attachments: chorro water permit 20866.pdf; chorro water permit 20867.pdf; chorro water permit 20868.pdf Hello,

I just came upon something that may help ensure that the City of Morro Bay cooperates in implementing water reclamation as part of the WWTP replacement project. I have attached the permits that allow the City to pump water from its wells in the Chorro Basin. At present, the only well it can use in that area is well 11A. This well is absolutely critical to Morro Bay's water supply. In this article

http://www.slocoastjournal.com/docs/archives/2010/March/pages/news2.html there is a discussion of incidents that occurred during the last State Water shutdown:

As the investigation proceeded, persons living near well 11A noted that Morro Bay had not ceased its use of that well, despite the fact that its ongoing violation of the SWRCB decision had been brought to light. The reason soon became clear.

The city had hired the Sacramento law firm of Ellison, Schneider & Harris, L.L.P. to help Morro Bay deal with the SWRCB. On Nov.17, 2009, during the annual State water shutdown, the law firm filed a "Petition for Temporary Urgency Change, permit 20867 (application 24245) Held by the City of Morro Bay". Attachments to the petition included these statements, "These actions are necessary to prevent an emergency because the Romero well is the City's only source of water supply during the scheduled SWP shutdown." and, "**The City requires the ability to pump** water from the Romero well in order to meet the municipal water demand. The City simply cannot cease diversions at its Romero well without great risk to the health and safety of its citizens."

Please note that on page three of each of the attached permits is this:

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to (1) reusing or reclaiming the water allocated; (2) using wter reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophylic growth; and (6) installing, maintaining and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project.

Exhibit 6 A-3-MRB-11-001 94 of 363 I believe that this means that the City could be required to reclaim water as a condition of being allowed to use its Chorro Valley wells. While it is presently using only 11A, I believe there are indications that the City wants to resume use of some of the other Chorro Valley wells at some point.

So, if the CCC could work with the State Water Board on this; in particular the Board's water rights people, it might make "selling" the idea of WWTP water reclamation a little easier, as reclamation of the maximum amount of water diverted from the basin could certainly ease the stress on the aquifer - especially during the summer months.

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 95 of 363

From:Linda Stedjee [Istedjee@charter.net]Sent:Friday, July 29, 2011 12:56 PMTo:Chuck Rich; Souza, Kurt (CDPH-DDWEM-DWFO)Subject:FYI - Morro Basin well nitrate informationHello,

A few days ago I sent you some information on some interesting data I found on this Water Board site: <u>http://geotracker.waterboards.ca.gov/gama/</u>

I picked one of Morro Bay's Morro Basin city wells and compared nitrate data from that well to nitrate data from a well (owned by Morro Bay Mutual Water) that is located on the nearby power plant property. a friend of mine "guesstimates" that the two well fields are about 1/4 mile apart, or less.

I put the pertinent data into a table so that would be easier to review, and so that the significant differences in the nitrate levels would be easier to see. I only included years for which Morro Bay Mutual Water data was provided.

Year	Well System	Sample Date	Nitrate level
2002	City of Morro Bay	10/21	47
		11/12	71
	Morro Bay Mutual Water	11/20	10
		12/26	8.7
2005	City of Morro Bay	9/20	27
		11/15	57
	Morro Bay Mutual Water	6/30	1.4
2006	City of Morro Bay	1/18	47
		6/6	46
		10/17	49
		11/20	84
		11/27	86
		11/28	84
		11/29	80
		11/30	80
		12/1	77
		12/4	81
		12/5	81

Exhibit 6 A-3-MRB-11-001 96 of 363
	Morro Bay Mutual Water	12/13	10
2007	City of Morro Bay	5/2	49
		5/7	55
		11/19	100
	Morro Bay Mutual Water	6/5	7.9
2009	City of Morro Bay	8/4	69
		9/15	73
		10/6	72
	Morro Bay Mutual Water	7/14	3.3

As you can see, the lowest reported nitrate level for the City well is 27, and the highest is 100. The lowest nitrate level reported for the Morro Bay Mutual Water well is 1.4, and the highest is 10 - quite a contrast.

The City keeps claiming the farmers are responsible for the nitrates in City wells, in the face of a whole lot of evidence that the real culprit is the City's own sewage. They have even said they are going to sue the farmers.

Now, it appears to me that we have some additional strong evidence that it is NOT the farmers.

Both well systems clearly get their water from the same aquifer and, therefore, if the nitrates were from agriculture upstream, we should see the same nitrate levels in both well fields. We obviously do not. Below is a diagram that was in the last email, showing the aquifer boundaries in black. The City wells are marked; the Morro Bay Mutual Water wells on power plant property are not, but the power plant property is at the bottom left of the picture, and lies adjacent to the wastewater treatment plant. You can see how close together they are.

Exhibit 6 A-3-MRB-11-001 97 of 363



So why the difference in nitrate levels? Gee, let me guess :-)

Linda Stedjee

Madeline Cavalieri

From:Richard E.T. Sadowski [r.e.t.sadowski@gmail.com]Sent:Wednesday, August 10, 2011 8:13 AMTo:Madeline CavalieriSubject:Morro Bay proposed Brine discharge

August 10,2011

Dear Ms. Cavalieri

I believe that the City of Morro Bay is attempting to keep the WWTP outfall pipe and easement available for the use of desalination Facility brine discharge. As stated in an August 8,2011 email to you from Ms.Stedjee, there are several issues of concern regarding the proposed discharge of brine via the MB/CAY WWTP outfall pipe.

The operation of the Morro Bay desalination plant is now under the jurisdiction of Morro Bay Capital Improvements Manager Dylan Wade. Currently, the facility discharges the brine waste via the Morro Bay Power Plant outfall - which has been operating under an 11-year-old administrative waiver issued by the CCRWQCB. To my knowledge, there have never been any studies or scientific evaluations regarding the effects of the desalination plant waste entering the Estero Bay from this practice.

As stated in Ms.Stedjee's e-mail, the agreement between the CSD and Morro Bay clearly states that brine discharge from the desalination facility into the WWTP outfall is prohibited. Additionally, no scientific studies regarding brine discharge have been done on the marine environment or the oceanic fluid dynamics near the MB/CAY WWTP outfall pipe. According to the August 11,2011 JPA agenda, the city of Morro Bay is considering discharging brine into the WWTP outfall pipe from a private source, Culligan Industrial (CCWT). One obvious issue regarding this is that once a precedent is set for discharging brine via the WWTP outfall there is nothing to stop the city from discharging brine from the desalination facility into the WWTP outfall.

It is likely that the Morro Bay-Cayucos WWTP will have to be relocated. However, if the outfall and the associated easements are still allowed, the outfall pipe could be used for brine discharge. Furthermore, with no scientific baseline for the environmental effects caused by this practice, an accurate and comprehensive environmental review would be difficult.

As you are aware, the issue of power plants utilizing once-through cooling (OTC), as is done in Morro Bay, has come under acute scrutiny by state legislative and regulatory bodies. Due to the detrimental effects to the Morro Bay Estuary and the direct effects on the Morro Bay East Estuary State Marine Reserve, it is likely that the Morro Bay Power Plant will not be able to continue to operate in the same manner. This will result in the city being forced to find a different means of disposing it's waste from the desalination facility. As previously stated, it now utilizes the Morro Bay Power Plant Outfall.

In Bruce Keogh's July 29 staff report that is attached to the August 11 JPA meeting agenda, it is stated that "There was discussion concerning the regulatory requirements and potential modifications to the NPDES permit for the MBCSD treatment plant. RWQCB staff indicated they felt the NPDES permit could be administratively amended ..." According to the NPDES Permit Program Overview, Course for Permittees, supported by the USEPA - Office of Water, an

Exhibit 6 A-3-MRB-11-001 99 of 363

8/10/2011

NPDES permit must be obtained from the EPA or an approved state. In other words, neither the CCRWQCB staff nor the Morro Bay city staff have the authority to administratively modify NPDES permits that discharge pollutants into the waters of the United States. Additionally local staff does not have authority to circumvent the Code of Federal Regulations (CFR), Title 40 protection of environment for industrial waste.

In the staff report 'Attachment A', Permit Condition #11, are listed heavy metals that require an NPDES permit. These are clearly identified in the CWA Toxic (Priority) pollutants CWA 307(a).

A few months ago I, along with a colleague, video recorded the construction and installation of desalination plant infrastructure by Brough Construction Inc. This project consisted upsizing the diameter of the piping for to the desalination plant.

A CEQA Negative Declaration was filed by the city. Today at the Morro Bay City Council Meeting (August 9, 2011), the City Council consent calendar includes a request for approval of Resolution No.57-11, authorizing the filing of a notice of completion for desalination product water line replacement project MB-2010-W1. Under the guise of repair and maintenance, the Morro Bay city staff have systemically increased the capacity and installed infrastructure to support further unregulated development in our area. I have several other examples of this kind of behavior if you are interested.

As a former public servant, i believe that each individual should be held accountable and liable for their actions regarding public health and safety. I will be going to the next Ocean protection Council Meeting that is being held in Sacramento on the same day that the MB/CSD JPA meeting is scheduled, and will share my thoughts on this matter with the OPC Board.

Thank you for your time and consideration regarding this public health matter, it is appreciated by many of us here.

... Richard

Exhibit 6 A-3-MRB-11-001 100 of 363

Madeline Cavalieri

From:Linda Stedjee [Istedjee@charter.net]Sent:Friday, August 12, 2011 6:47 AMTo:Madeline CavalieriSubject:Update on status of Proposal to dump Culligan brine at Morro Bay-Cayucos WWTP outfall

Hello,

This is just a quick update. A formal letter to the Commissioners will be sent next week and will send you a copy.

The JPA meeting was held last night, and the Morro Bay City Council and Cayucos CSD considered the proposal to establish a contract with Culligan to dispose of their brine at the WWTP outfall. According to someone who was there, it appeared (to him and to some other attendees) that the CSD was initially attempting to push the Culligan issue through without public input. Whether or not that was their intent, they did not succeed.

Morro Bay resident Richard Sadowski told the Board that neither Bruce Keogh, nor Roger Briggs, nor Harvey Packard nor anyone else on the CCRWCB staff has the authority to administratively modify the Morro Bay-Cayucos WWTP NPDES permit to allow the discharge of brine, and that furthermore, the proposed brine discharge would require a CDP from the CCC. He further stated that if the JPA Board were to proceed with this action it would be complicit in violating its existing WWTP NPDES permit. Morro Bay resident Betty Winholtz then spoke further on the need for a CDP. Then, Morro Bay resident Marla Jo Bruton spoke, stating that she had completed the NPDES Permitee issuance course in 2006. She read from the permit manual and stated that all point sources discharging pollutants into the waters of the US must obtain a NPDES permit from the EPA or an approved state. She also told the Board that the CWA class of pollutants, Toxic Priority pollutants CWA307(a), Heavy metals, copper, lead, zinc, nickle, chromium et al.,organic chemicals, benzene, 1,2dichlorobenzene, carbon tetrachloride, etc. require an NPDES permit. She further commented about the fact that we are currently "in limbo" regarding the WWTP and yet the Board was considering a precedent-setting action to dump industrial waste.

After some discussion, the Board decided that the "concept" should be investigated further, so there is no permit in the works - at least for now. I do not think this item is urgent anymore. Residents obviously got the information they needed to put the brakes on this latest questionable idea from Morro Bay City staff. However, we will watch the situation closely as the issue is probably not "dead".

OK. That's it. I will now go back to sending my communications to the CCC by post, until such time as some other issue comes up that appears to be time dependent and subject to the laws enforced by the CCC.

Linda Stedjee



August 15, 2011

Dear California Coastal Commissioners,

I am writing to advise you of some serious concerns regarding recent actions related to the Morro Bay-Cayucos wastewater treatment plant (WWTP). A staff report (attached) presented to the Morro Bay City Council and Cayucos Sanitary District (CSD) Board members proposes that a contract be negotiated with Central Coast Water Treatment (CCWT), the local Culligan water operation. The contract involves disposing of the brine from CCWT operations in the Morro Bay-Cayucos WWTP ocean outfall. The proposal is currently under study.

Reasons for residents' concerns are expressed in the following questions:

- 1. Why does the proposal make no mention of a Coastal Development Permit (CDP)?
- 2. Why does the proposal make no mention of scientific studies that would be needed to determine the potential impacts of brine disposal on aquatic life?
- 3. If the City Council and the CSD Board and their staffs are sincere about investigating alternate sites for the new WWTP, why would they be considering negotiating a contract that would involve using existing WWTP infrastructure?

These concerns are discussed in detail below.

The Need for a CDP

Clearly, a CDP is required when industrial waste is to be disposed of in a new location in the Coastal Zone. As you know, Section 30106 of the Coastal Act defines "development" as follows:

"Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511).

Yet, the Culligan proposal discusses only a potential modification of the existing NPDES permit for the WWTP:

"City staff did discuss the possibility of utilizing the plants ocean outfall for disposal of brine from CCWT with RWQCB staff. They were supportive of this concept and feel that ocean outfalls are appropriate choices for disposal of brine solutions provided adequate monitoring and reporting requirements are in place. There was discussion concerning the regulatory requirements and potential modifications to the NPDES permit for the MBCSD treatment plant. RWQCB staff indicated they felt the NPDES permit could be administratively amended provided the quantity of brine was limited to the amounts similar to those currently being disposed of by CCWT."

There are even concerns with the proposed handling of this permit. Does the above text indicate that City staff and the RWQCB intend to modify the NPDES permit without EPA interaction? As Morro Bay resident and clean water activist Richard Sadowski has pointed out, "If local city and CCRWQCB staff can administratively amend a Federal NPDES Permit, what do we need the US EPA and Cal EPA for? Our local staff appears to have given themselves the authority to issue and/or modify NPDES permits without any scientific review or oversight."

The Need for Scientific Studies

The results of some initial resident research indicate that brine discharge into the ocean is not without its negative impacts, and I do not believe that the City and the CSD have done any scientific studies to determine the potential impacts of brine discharge through the WWTP outfall. They appear to assume that there would be no difference between discharging the brine in Morro Bay and the discharges in other areas, stating,

Exhibit 6 A-3-MRB-11-001 102 of 363 "Any brine disposal permit issued would be modeled after the South County permit for CCWT and would contain monitoring and reporting requirements for parameters such as pH, Total Dissolved Solids (TDS), and selected metals that would be protective of the receiving waters. In addition, the South County permit contains provisions fc indemnifying South County and has provisions for suspension of the permit."

And

1.

"Staff also spoke with staff at the Monterey Regional Water Pollution Control Agency (MRWPCA) that provides a similar service to brine generators throughout the Monterey area. They allow brine generators to dispose of brine either through the outfall or by concentrating brine in onsite storage ponds for later disposal at the landfill."

As Mr. Sadowski has noted, "Each Outfall has its own unique effects on the surrounding marine environment that need to be investigated for the effects of brine discharge. Comparing brine discharges in South County, Monterey or Hollister to the potential effects on Estero Bay's marine environment is absurd."

A study on desalination plant brine discharge, "Evaluating Environmental Impacts of Desalination in California" by H. Alper C. Borrowman and B. Haddad, and dated July 2007 deals with desalination plant brine, but may be applicable to Culligan brine as well. The authors state,

"Ocean discharge is viable but requires a significant amount of research to prove environmentally sound. Studies (hydrodynamic modeling, toxicity testing, salinity tolerance analysis, and intake water quality characterization must be completed before approving an open ocean discharge."

The study also says,

"Every site has a limited carrying capacity with respect to assimilating brine and thermal waste."

A University of Texas study, "Fate of Desalination Brine in Texas Coastal Bays and Estuaries" states,

"Disposal of brine into coastal waters is an economical option for the desalination projects. After discharge, dense brine water flows below the less-dense ambient water to form a stratified cap over the bottom sediment. Typically, is not the quantity of salt discharged that causes a problem; it is the mixing rate and the brine's fate prior to complete mixing that determines impacts. If natural forces of plume flow, wind mixing and tidal currents are slow to mix the brine with the overlying water, biogeochemical processes in the sediment may deplete the available dissolved oxygen near the bottom, causing hypoxic (low oxygen) conditions that harm aquatic life. Some Texas bays already experience episodic hypoxia when high evaporation rates combine with weak winds to produce stratified conditions [1, 2], which could be exacerbated by poorly-sited brine discharges. Finding the optimum discharge location requires a tool for computing the fate of brine with varying winds and currents."

In addition, researchers Jean-Daniel Saphores, Tim Bradley, Sunny Jiang, and Jan Scherfig have suggested that when brine is mixed with secondary treated sewage, the result may be an unintended modification of microbial community composition & diversity, and that the result might be "evolution and adaptation of some microbial pathogens to marine wat in discharge field"

The Alpert/Borrowman /Haddad study, referenced above, echoes this concern, stating,

"There may be synergistic effects in combining brine with other types of discharge (wastewater or power plant outfalls)."

It must also be noted that modeling anything, including permits, on operations at the South County Sanitation District may be inadvisable. As noted in the recent Cal Coast News story, "Sewage Plant Continues to Violate Environmental Requirements" (attached),

"Meanwhile, the sanitation district, which provides sewer services to Arroyo Grande, Grover Beach and the unincorporated town of Oceano, has come under fire for violating numerous state and federal environmental requirements. Under Wallace's leadership district's reserves have dwindled from \$12.2 million in 1998 to about \$4 million today.

Former employees Devina Douglas and Scott Mascolo contend a former plant supervisor instructed staff to manipulate effluent release numbers in order to keep the public from knowing the aging plant is irExbibit of a A-3-MRB-11-001 103 of 363 complete upgrade. If the plant is modernized, Wallace, who is not qualified to manage a modern sewage plant, would lose a lucrative source of income."

The "Wallace" referred to above is John Wallace, head of Wallace Group, which is the organization that the City and the CSD chose to co-manage the Morro Bay-Cayucos WWTP project.

Conflicts With Potential Relocation of the WWTP

Some residents are concerned that the City of Morro Bay would be considering establishing any contract that utilizes infrastructure associated with the current WWTP location. As you know, the City and the CSD failed to specify viable alternative sites in the DEIR for the WWTP upgrade/replacement project, despite the fact that CCC staff had advised them to do so. As required by the CCC, the City and CSD are supposedly now working on identifying those sites. If they sincerely want to consider moving the plant, as recommended by the CCC, why would they be considering the Culligan contract?

In the past, the CSD has been completely opposed to the discharge of brine into the WWTP outfall. The staff report says,

"It should be noted, that the City and District have a settlement agreement that prohibits the discharge of brine from the City's desalination facility into the outfall. This settlement agreement does not preclude consideration of proposals for brine disposal from other sources such as CCWT."

Given the prior opposition to brine disposal in the outfall, why would City staff believe that the CSD would now accept the idea?

One hypothesis is that the City and the CSD hope that the Culligan contract for use of current WWTP infrastructure would, from a legal perspective, make it difficult to move the WWTP to another location. A second theory proposed by residents is that they City and CSD hope to sway public opinion in favor of the current WWTP site by making that site a "revenue source" - a brine disposal center for various clients. In fact, the staff proposal says,

"The current proposal is for a limited volume of brine disposal. If successful, other brine generators may be interested in a similar concept, especially as salt management programs develop within the watershed."

Another hypothesis, suggested by Mr. Sadowski, is that the proposed Culligan contract might be viewed as a step toward establishing the WWTP outfall as a new site for disposing of brine from the Morro Bay desalination plant. Currently, the brine is discharged into the Morro Bay power plant outfall. However, given the issues related to once-through cooling, the power plant may not be using its outfall much longer – which would mean that it would no longer be available to the City.

Related to this hypothesis are concerns regarding Morro Bay's permits for using the power plant outfall for brine discharge. Residents are in the process of determining whether the required CDP's and other permits were obtained for installation of the pipeline, through ESHA, to the power plant outfall, and for the discharge of the brine.

Current Status of the Proposal

At present, the Culligan brine discharge proposal is still under consideration. However, resident input appears to have slowed it down considerably.

On August 11, the proposal was formally considered by the Morro Bay City Council and the CSD, which comprise the "JPA Board". In the opinion of one resident who attended the meeting, it appeared that the CSD was initially attempting to push through the proposal without public input. Whether or not that is so, the proposal was not approved by the Board, and public comment appears to have been the reason.

Morro Bay resident Richard Sadowski told the Board that neither Bruce Keogh (Morro Bay WWTP manager and Culligan proposal author), nor Roger Briggs, nor Harvey Packard nor anyone else on the CCRWCB staff has the authority to administratively modify the Morro Bay-Cayucos WWTP NPDES permit to allow the discharge of brine. He noted that furthermore, the proposed brine discharge would require a CDP from the CCC. Sadowski stated that if the JPA Board were to proceed with this action it would be complicit in violating its existing WWTP NPDES permit.

Morro Bay resident Betty Winholtz then spoke. She further addressed the need for a CDP.

Exhibit 6 A-3-MRB-11-001 104 of 363 Morro Bay resident Marla Jo Bruton also spoke on the issue, stating that she had completed the NPDES Permitee issuance course in 2006. She read from the permit manual and stated that all point sources discharging pollutants into the waters of the US must obtain a NPDES permit from the EPA or an approved state. She also told the Board that the CWA class of pollutants, Toxic Priority pollutants CWA307(a), Heavy metals, copper, lead, zinc, nickle, chromium et al.,organic chemicals, benzene, 1,2-dichlorobenzene, carbon tetrachloride, etc. require an NPDES permit. She further commented about the fact that we are currently "in limbo" regarding the WWTP and yet the Board was considering a precedent-setting action to dump industrial waste.

After some discussion, the Board decided that the Culligan contract "concept" should be investigated further. So there is no permit in the works - at least for now. However, residents will watch the situation closely, as we do not expect proposal backers to give up easily. We will keep the CCC informed of our findings.

As always, thank you for considering the concerns of Morro Bay residents.

Sincerely,

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442 Istedjee@charter.net

cc: Madeline Cavalieri

RECEIVED

AUG 17 2011

California Coastal Commission, Central Coast Area

> Exhibit 6 A-3-MRB-11-001 105 of 363

Agenda No. C-2

STAFF REPORT

Date: August 11, 2011

MORRO BAY-CAYUCOS J.P.A. WASTEWATER TREATMENT PLANT

To: Honorable Mayor and City Council, City of Morro Bay Honorable President and Board of Directors, Cayucos Sanitary District

From: Bruce Keogh, Wastewater Division Manager

Date: July 29, 2011

Subject:

Consideration and Discussion of a Proposal from Central Coast Water Treatment DBA: Culligan Industrial (CCWT) for Brine Disposal

Recommendation:

This Department recommends that following consideration and discussion of this item that the Council and District Board approve of the brine disposal concept; direct staff to notify the Regional Water Quality Control Board (RWQCB) of MBCSD's intent to discharge brine; and direct staff to develop a permit and agreement with CCWT for brine disposal.

Fiscal Impact:

At this time there is no fiscal impact. If the Board and Council agree to accept this proposal then there is the potential for revenue to be generated, the amount would depend on the quantity of brine discharged and the associated fee. There will be some operational expense associated with this proposal, but those expenses are expected to be minimal.

Summary:

City staff has been contacted by CCWT to discuss the feasibility of disposing of brine generated by CCWT in the ocean outfall for the treatment plant. A copy of the proposal from CCWT is attached. Historically they have utilized the ocean outfall for the South County Sanitation District (South County) for disposal of their brine. Due to mechanical issues at South County they are not currently accepting brine, but do intend to allow this discharge in the future once the mechanical issues have been resolved.

If the Council and District Board approve of this concept, the next step would be to notify the Regional Water Quality Control Board (RWQCB) of our intent to discharge brine. Following approval by RWQCB, City staff would prepare a brine disposal permit for CCWT.

Background:

Central Coast Water Treatment is a Culligan franchise that sells water softeners and RO systems to Commercial /Industrial customers. They also rent and regenerate DI (deionized) tanks that produce pure water for labs, wineries, car lots, etc. CCWT is owned by the three other local Residential Culligan franchises (Morro Bay, Santa Maria, and Lompoc). The brine comes from the regeneration of CCWT's DI tanks. Prior to December 2010, CCWT had been transporting their brine to the South County WWTP for disposal in the Districts ocean outfall. The brine generated by CCWT has a total dissolved solids (TDS) concentration of between 30,000 and 60,000 parts per million (ppm). For comparative purposes, sea water has a TDS of approximately

Exhibit 6 A-3-MRB-11-001 106 of 363 35,000 ppm. They pay a tipping fee of \$11.25 per 1000 gallons (\$.01125 per gallon) of brine delivered. For the period July 2009 to December 2010, they averaged 32,818 gallons of brine per month with an average monthly fee of \$369. Due to the temporary mechanical problems noted above, CCWT is currently trucking brine to the Santa Paula area for disposal via an outfall in that area. They are paying \$150 per 1000 gallons (\$.15 per gallon) at the Santa Paula facility.

CCWT has a permit with the South County that limits the quantity of brine that can be discharged (50,000 gallons per day, but they are well below that limit), the manner of introduction into the outfall, and any testing requirements prior to disposal. A copy of the CCWT permit and associated monitoring results are included in the attached proposal. They are currently required to test for pH, conductivity (measure of total dissolved salts), selected salts, and metals.

Staff from CCWT has indicated that even if they are allowed to continue to dispose of brine at South County they would like to have a back up plan in the event that their normal disposal option is unavailable for any reason.

Discussion:

No water quality issues are expected based on the limited quantity of brine proposed for disposal. Any brine disposal permit issued would be modeled after the South County permit for CCWT and would contain monitoring and reporting requirements for parameters such as pH, Total Dissolved Solids (TDS), and selected metals that would be protective of the receiving waters. In addition, the South County permit contains provisions for indemnifying South County and has provisions for suspension of the permit.

City staff did discuss the possibility of utilizing the plants ocean outfall for disposal of brine from CCWT with RWQCB staff. They were supportive of this concept and feel that ocean outfalls are appropriate choices for disposal of brine solutions provided adequate monitoring and reporting requirements are in place. There was discussion concerning the regulatory requirements and potential modifications to the NPDES permit for the MBCSD treatment plant. RWQCB staff indicated they felt the NPDES permit could be administratively amended provided the quantity of brine was limited to the amounts similar to those currently being disposed of by CCWT. They also indicated that they would like the brine discharge introduced upstream of the plants effluent sampling location so that a representative sample of effluent is collected for analysis. This could be accomplished by introducing the brine in to the outfall immediately after the chlorine contact chamber and upstream of the effluent monitoring station.

Staff also spoke with staff at the Monterey Regional Water Pollution Control Agency (MRWPCA) that provides a similar service to brine generators throughout the Monterey area. They allow brine generators to dispose of brine either through the outfall or by concentrating brine in on-site storage ponds for later disposal at the landfill. They have pursued this program to enhance their water reclamation program by reducing the TDS of their effluent. They currently charge \$.04 per gallon (\$40 per 1000 gallons) for customers within their service area and \$.07 per gallon (\$70 per 1000 gallons) for customers outside their service area.

If the Council and District Board approve of this proposal, the City would prepare and issue a permit similar to the permit issued by South County. The permit would:

- · Limit the type of waste to be discharged to brine waste
- Establish a fee schedule
- Establish a maximum daily volume of brine, based on the historical volumes delivered by CCWT, for example, the total volume could be limited to 50,000 gallons a month with a

daily maximum volume of 10,000 gallons (the current permit with South Coast Sanitation is 50,000 gallons per day).

- Limit disposal hours from 10am to 2pm Monday through Friday (provides for maximum dilution of brine during peak flow periods)
- Provide for indemnification of the City and District
- Contain provisions for the suspension of the permit

Tipping fees generated from the brine disposal would need to be established. As noted above, there are widely varying fees for brine disposal depending on the facility accepting the brine. Staff would recommend that the tipping fees be modeled on MRWPCA's disposal fee of \$.07 per gallon (\$70 per 1000 gallons), as CCWT is not in the MBCSD service area. Based on historical average volumes (32,000 gallons per month) revenue could range from \$360 (at \$.01125 per gallon) to \$2240 (at \$.07 per gallon) per month. In addition, staff would recommend that revenues be cost apportioned between the City and District on the basis of ownership rather than pro rata share of flow. This would result in a cost split of 65% to the City and 35% to the District.

Expenses associated with this proposal should be minimal. There will be some costs associated with installing the piping system for introducing the brine into the outfall. There will also be some nominal staffing costs associated with checking in and monitoring of the trucks bringing brine to the plant. Those costs would be tracked and the tipping fee could be adjusted as required to cover expenses.

The current proposal is for a limited volume of brine disposal. If successful, other brine generators may be interested in a similar concept, especially as salt management programs develop within the watershed. Salt management programs are being developed to facilitate basin-wide management of salts and nutrients from all sources in a manner that optimizes recycled water use while ensuring protection of groundwater supply and beneficial uses, agricultural beneficial uses, and human health. RWQCB currently has salt management programs in the Monterey region as well as the area around Hollister California.

It should be noted, that the City and District have a settlement agreement that prohibits the discharge of brine from the City's desalination facility into the outfall. This settlement agreement does not preclude consideration of proposals for brine disposal from other sources such as CCWT.

Conclusion:

This Department recommends that following consideration and discussion of this item that the Council and District Board approve of the brine disposal concept; direct staff to notify the Regional Water Quality Control Board (RWQCB) of MBCSD's intent to discharge brine; and direct staff to develop a permit and agreement with CCWT for brine disposal.

Lab/Bkeogh/JPA/2011 meetings/August 11, 2011 JPA meeting/JPA Culligan Proposal for Brine Discharge August 11, 2011

Exhibit 6 A-3-MRB-11-001 108 of 363 July 21, 2011 Bruce Keogh Waste Water Treatment plant Division manager 160 Atascadero rd. Morro Bay CA, 93442

Attention: Bruce Keogh

Central Coast Water Treatment DBA: Culligan Industrial, request for an Authorization Permit to deliver city water and salt brine waste to Morro Bay Waste Treatment Plant for disposal.

Central Coast Water Treatment DBA: Culligan Industrial is requesting an authorization permit for the disposal of salt brine waste at the Morro Bay Waste Water Treatment Plant. This proposal reflects the same conditions that based the approval with South San Luis Obispo County Sanitation District. The salt brine was sampled 24 times from 8 Sep 2009 to 16 Dec 2010. The samples on a monthly basis were combined and sent to Creek/Abalone lab for independent testing with the results compiled by Wallace group. The salt brine was tested for sodium, chloride, total dissolved solids, copper, zinc and the results are well under the maximum limit by South San Luis Obispo Sanitation District. The approximate average amount of salt brine waste Central Coast Water Treatment DBA: Culligan Industrial will be disposing is 31,000 gallons monthly; that is well below the daily amount of 50,000 gallons set by South San Luis Obispo County Sanitation District.

Attached are the data enclosures ; South San Luis Obispo County Sanitation District Brine Disposal Waste Permit, Number of brine hauls per month, total brine haul in gallons and the monthly testing report.

Sincerely:

Mym

Arby Kitzman

Exhibit 6 A-3-MRB-11-001 109 of 363



SOUTH SAN LUIS OBISPO COUNTY SANITATION DISTRICT

Post Office Box 339 Oceano, California 93475-0339 1600 Aloha Oceano, California 93445-9735 Telephone (805) 489-6666 FAX (805) 489-2765 <u>http://www.sslocsd.org/</u>

BRINE DISPOSAL WASTE PERMIT

Permit Issued To:

Central Coast Water Treatment, 966 Huber Street Grover Beach, CA 93433

PHONE: Days: 805-481-4590

Evenings: 805-680-2560

DATE OF ISSUANCE:September 4, 2009EXPIRATION DATE:June 30, 2010

WASTE TYPE: City Water and Salt Brine

\$425.00 ONE-TIME APPLICATION FEE:

\$10,000 DEPOSIT OR BOND

FEE RATE: \$11.25/1000 gal (subject to change)

DATE: January 15, 2003 ACCOUNT NUMBER: M507299

DATE: Paid - March 2003

DATE: June 30, 2009

\$500.00 INITIAL ANNUAL PERMIT FEE: DATE: Paid – June 30, 2002

\$500.00 ANNUAL PERMIT FEE:

COMMENTS: Annual Permit Fee due June 30, 2010

The Permittee is authorized to discharge salt brine to the turn-out structure pipeline connection and metering facilities in compliance with the conditions outlined in Attachment A. The permittee has an Application and Agreement on file with the District, which by reference is incorporated herein as if fully set forth.

SOUTH SAN LUIS OBISPO COUNTY SANITATION DISTRICT

DISTRIC

9/4/09 ATE

CENTRAL COAST WATER TREATMENT

GENERAL MANAGER

Exhibit 6 A-3-MRB-11-001 110 of 363

Attachment A PERMIT CONDITIONS

- 1. Permittee recognizes that the use of District's facilities to dispose of salt brine waste into the Pacific Ocean is a privilege. The permit issued by the District is required prior to any discharge.
- 2. A non-hazardous waste manifest must accompany all loads.
- Permit suspension can occur at the discretion of the District or upon violation of permit requirements.
- 4. Hazardous wastes as defined in Title 22, Division 4.5, Chapter 11, Article 1 of the California Code of Regulations §66231.3 are prohibited.
- 5. This permit is not transferable.
- This permit is subject to the District's current Pretreatment Ordinance as required by the District.
- 7. Subject to Annual Review.
- 8. A Chain of Custody shall be required for all discharges into the outfall line.
- Brine Station hours of operation are as follows: Monday through Friday 8:00 AM to 3:00 PM.
- 10. Permittee is aware that the District is limited to 50,000 gallons of brine per day. Discharges will not be allowed in excess of the daily allowance. Permittee acknowledges that this could result in the Permittee's inability to discharge on a particular day where the 50,000 gallon limitation has been reached or may be limited to that amount which can be discharged without violation of the 50,000 gallon per day limitation.
- 11. The brine shall not cause the District to exceed its waste discharge permit in any manner and the brine shall not include constituents other than those identified in the applicant's application on file herein. Those concentrations are as follows:

Constituent	Limit	Test
Copper	5.0 mg/l	*Every Load
Sodium	38,000 mg/l	Monthly
Chloride	110,000 mg/l	Monthly
Total Dissolved Solids	200,000 mg/l	Monthly
Copper	5.0 mg/l	Monthly
Zinc	11.96 mg/l	Monthly

Constituent	Limit	Test
Arsenic	4.82 mg/l	Annually
Cadmium	0.66 mg/l	Annually
Chromium	1.33 mg/l	Annually
Lead	1.33 mg/l	Annually
Mercury	26.48 ug/l	Annually
Nickel	3.32 mg/l	Annually
Selenium	1.0 mg/l	Annually
Silver	0.44 mg/l	Annually

* CCWT will self-analyze each load for Copper using a Hach Colorimeter or other appropriate instrument. CCWT will put test result on a log sheet to be kept for 3 years. It is understood that these test results are to be used by CCWT as an initial determination if a load is suitable for discharge. If results indicate a Copper concentration greater than 4.5 mg/l the load shall not be disposed of at SSLOCSD. A separate sample shall then be sent to a certified lab for reanalysis and the Plant Superintendent and District Engineering Staff shall be contacted to determine resolution.

- 12. The Permittee shall submit monthly reports from a California certified Environmental Laboratory Accreditation Program (ELAP) laboratory of analytical results from samples taken from their discharge. Monthly reports shall be submitted to the District to the attention of the Plant Superintendent by the 15th of the following month.
- 13. District reserves the right to test salt brine discharge into its system at its discretion. Any violation of this permit's limitations or of any other District, State or Federal law regulating regarding said discharge shall result in all costs being charged to Permittee.
- 14. Permittee shall use an identified dedicated delivery vehicle to deliver brine to the District. Further, the permittee guarantees and warrants that the delivery vehicle is free of any other contaminant or constituent that would affect the discharge and its compliance with said permit.
- 15. Except as otherwise provided in subparagraphs (b) and (c) below, Permittee shall defend, indemnify and save harmless the District, its officers and employees, from any and all claims, demands, damages, costs, expenses, judgements, attorney fees or any liability arising out of this contract or attempted performance of the provisions hereof predicated upon theories set forth below in subparagraph (a) below:
 - A. The theories referred to above are theories based on any of the following committed by the Permittee, or its agents, employees, or for independent contractors including but not limited to trucking companies and their employees directly responsible to Permittee;
 - 1. Violation of statute, ordinance or regulation.

- 2. Willful, intentional or other wrongful acts or failures to act.
- 3. Negligence or recklessness.
- B. Nothing contained in the foregoing indemnity provision shall be construed to require indemnification for claims resulting from the sole or active negligence or willful misconduct of the District, provided however, this exception shall not apply to claims, demands, damages, costs, expenses, judgments, or attorney fees arising from any design defects.
- C. Nothing contained in the foregoing indemnity provisions shall be construed to require Permittee to indemnify District, against any responsibility or liability in contravention of Civil Code 2782.

Exhibit 6 A-3-MRB-11-001 113 of 363

South San Luis Obispo Sanitation District Brine Disposal Sept 2009 - 2010 Monthly Report from CCWT 2009 Monthly Reporting - all data in mg/l or ppm

	Exceed?	(Ves/No)	No	No	No	No
		Zinc Limit	11.96	11.96	11.96	11.96
		Zinc	2	Q	1.2	0.52
	Copper	Limit	0	\$	5	ŝ
		Copper	0.394	0.81	0.44	0.43
		TDS Limit	200000	200000	200000	200000
Total	Dissolved	Solids	42219	32500	32100	33500
	Chloride	Limit	110,000	110,000	110,000	110,000
		Chloride	18800	20000	20,000	20000
	Sodium	Limit	38000	38000	38000	38000
		Sodium	4030	12000	0066	11000
	Month - Date	Sampled	8-Sep-09	30-Oct-09	24-Nov-09	21-Dec-09

2010 Monthly Reporting - all data in mg/i or ppm

		Total						
Sodium Chloride	Chloride	Dissolved			Copper			Exceed?
Limit Chloride Limit	Limit	Solids	TDS Limit	Copper	Limit	Zinc	Zinc Limit	(Ves/No)
36000 22000 110,000	110,000	35100	200000	0.37	5	Q	11.96	No
38000 22700 110,000	110,000	33800	200000	0.682	5	QN	11.96	No
38000 17200 110,000	110,000	32600	200000	QN	ŝ	QN	11.96	No
38000 17400 110,000	110,000	27600	200000	0.901	10	QN	11.96	No
38000 23100 110,000	110,000	36400	200000	QN	10	Q	11.96	No
38000 110,000	110,000		200000		\$		11.96	語語調理に行
38000 24000 110,000	110,000	46200	200000	0.43	5	0.33	11.96	No
38000 23000 110,000	110,000	37000	200000	1.8	ю	5.6	11.96	No
38000 27000 110,000	110,000	45700	200000	0.88	ŝ	3.3	11.96	No
38000 26000 110,000	110,000	46740	200000	0.45	ND	0.57	11.98	No
38000 110,000	110,000		200000		ŝ		11.96	
38000 110,000	110,000		200000		IO I		11.96	

Exhibit 6 A-3-MRB-11-001 114 of 363

SSLOCSD - CCWT Brine Results 2010 Monthly Reporting - all data in mg/l or ppm

	xceed?	Yes/No)	No	No	No	No	No		No	No	No	No	No	No
	ω.	Zinc Limit (11.96	11.96	11.96	11.96	11.96	11.96	11.96	11.96	11.96	11.96	11.96	11.96
		Zinc	Q	QN	QN	9	9		0.33	5.6	3.3	0.57	1.1	1.2
	Copper	Limit	5	5	S	ю	5	S	10	S	5	S	5	ŝ
		Copper	0.37	0.682	QN	0.901	QN	日本語が語る	0.43	1.8	0.88	0.45	0.72	0.82
		TDS Limit	200000	200000	200000	200000	200000	200000	200000	200000	200000	200000	200000	20000
Total	Dissolved	Solids	35100	33800	32600	27600	36400		46200	37000	45700	46740	44660	43440
	Chloride	LImit	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000
		Chloride	22000	22700	17200	17400	23100		24000	23000	27000	26000	25000	25000
	Sodium	Limit	38000	38000	38000	38000	38000	38000	38000	38000	30000	38000	38000	38000
		Sodium	15000	11900	12200	10500	12600		15000	14000	17000	15000	16000	16000
	Month - Date	Sampled	20-Jan-10	18-Feb-10	26-Mar-10	21-Apr-10	26-May-10		July 29, 2010	24-Aug-10	27-Sep-10	25-Oct-10	16-Nov-10	16-Dec-10

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Exhibit 6 A-3-MRB-11-001 115 of 363

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Date	Gallons	Rate (per gal)	Total Cost
July, 2009	12,402	0.01125	\$ 139.52
Aug, 2009	15,957	0.01125	\$ 179.52
Sept, 2009	32,535	0.01125	\$ 366.02
Total	60,894		\$ 685.06
Oct, 2009	38,251	0.01125	\$ 430.32
Nov, 2009	36,359	0.01125	\$ 409.04
Total	74,610		\$ 839.36
Dec, 2009	34,091	0.01125	\$ 383.52
			\$ -
Jan, 2010	30,002	0.01125	\$ 337.52
Feb, 2010	26,516	0.01125	\$ 298.31
March, 2010	34,457	0.01125	\$ 387.64
April, 2010	33,067	0.01125	\$ 372.00
May, 2010	43,253	0.01125	\$ 486.60
June, 2010	42,809	0.01125	\$ 481.60
July, 2010	44,514	0.01125	\$ 500.78
Aug, 2010	39,111	0.01125	\$ 440.00
Sept, 2010	40,570	0.01125	\$ 456.41
Oct, 2010	35,220	0.01125	\$ 396.23
Nov, 2010	31,092	0.01125	\$ 349.79
Dec, 2010	20,525	0.01125	\$ 230.91
Total	421,136		\$ 4,737.78

South SLO County Sanitation District

Exhibit 6 A-3-MRB-11-001 116 of 363

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Exhibit 6 A-3-MRB-11-001 117 of 363

Sewage plant continues to violate environmental requirements

August 9, 2011

By KAREN VELIE

South San Luis Obispo County's aging sewer plant continues to release inadequately treated sewage into the Pacific Ocean, according to the plant's records.

Specifically, in July, the plant was in violation of biological oxygen demand (BOD) standards it is required to meet. BOD has traditionally been used to measure the amount of solids such as feces and rotting foods in treated wastewater released from sewage plants to surface waters or streams.

The cleaner the effluent, the lower the BOD number.

Sewage effluent high in BOD can deplete oxygen in receiving waters, killing fish and changing the ecosystem.

Groups such as the <u>San Luis Obispo Surfrider Foundation</u> question the effect the poorly treated sewage is having on swimmers and surfers in Pismo Beach.

Because the south county plant is outdated, it is allowed a monthly average of no more than 40 mgl BOD before it is in violation of its permit. Exceeding BOD limit exposes the plant and the rate payers to fines from state regulators.

In comparison, the more modern San Luis Obispo city wastewater plant releases treated sewage at about 1 mgl BOD, or within drinking water standards. Regulatory agencies require modern facilities to keep their BOD in the single digits.

In July, the South County plant violated its 40 mgl BOD limit on ten days with a max result of almost 80 mgl BOD on July 20, according to a graph on the plant's website.

In 2010, several former South County Sanitation District employees accused administrator John Wallace of funneling thousands of dollars to a private engineering company he owns while concealing environmental violations at the plant. Monies Wallace spent on repairing rather than replacing the outdated facility.

In June, the San Luis Obispo County Grand Jury validated allegations that Wallace as the plant administrator had been funneling millions of dollars to his private engineering company without proper oversight and that a conflict of interest exists because Wallace is the plant administrator while his firm retains the engineering contract

The Grand Jury recommends that the district board consider hiring independent management and that it evaluate and compare organizational and operational alternatives for the district.

"The Grand Jury finds the district in a state of denial regarding the conflict of interest and, as a result, the district has taken no effective steps to mitigate the conflict," the report says. "The Grand Jury concludes that, as a result, the board and the district are exposed to a number of financial, legal and public trust issues."

Exhibit 6 A-3-MRB-11-001 118 of 363 Meanwhile, the sanitation district, which provides sewer services to Arroyo Grande, Grover Beach and the unincorporated town of Oceano, has come under fire for violating numerous state and federal environmental requirements. Under Wallace's leadership district's reserves have dwindled from \$12.2 million in 1998 to about \$4.5 million today.

Former employees Devina Douglas and Scott Mascolo contend a former plant supervisor instructed staff to manipulate effluent release numbers in order to keep the public from knowing the aging plant is in need of a complete upgrade. If the plant is modernized, Wallace, who is not qualified to manage a modern sewage plant, would lose a lucrative source of income.

Douglas and Mascolo said that for several years the plant has been unable to comply with environmental requirements during the summer months. Instead administrators avoided sampling when they were not certain they could reach their BOD requirements.

In 2010, former lab technician Douglas said she refused to throw away a sample that showed high levels of bacteria when instructed to do so by Jeff Appleton, the plant superintendent. An event witnessed by four plant employees, according to a water board investigation.

Douglas told CalCoastNews that Appleton asked her several times during 2010 to manipulate samplings in order to cover for problems at the plant.

After taking her concerns to Wallace, who allegedly made no changes, Douglas informed the state and local water boards of the plant's mismanagement. An investigation that followed resulted in the plant being served multiple notices of violation and Wallace terminating both Douglas and Mascolo.

During periods of non-compliance, Douglas and Mascolo said Wallace would increase sampling to every day in order to reduce the average BOD.

Wallace claimed at a district board of directors meeting last week that the district was voluntarily sampling every day in July in order to better characterize the effluent. At the same meeting, interim plant superintendent Bob Barlogio said the July BOD violation would likely result in fines.

On December 18, as the result of influent pump failures, as much as 3 million gallons of raw sewage was dumped into Oceano neighborhoods, beaches and the Pacific Ocean.

State regulators responded in May and served the district another notice of violation because of the December spill and conflicting sewage release numbers. Wallace answered the violation in June and is awaiting the state's response which could include fines of up to \$30 million that would fall on the communities and the rate payers, and criminal action against district officials if it is determined they responded untruthfully.

Exhibit 6 A-3-MRB-11-001 119 of 363

Madeline Cavalieri

From:	Linda Stedjee [Istedjee@charter.net]
Sent:	Thursday, September 01, 2011 6:29 PM
То:	Madeline Cavalieri
Subject:	rough site screening report for Morro Bay WWTP

Hello,

I am shocked at the consultants' report, which actually ranks the current site as the number one contender:

> Based on the summary analysis above, the alternative sites that were > determined to display the greatest environmental and LCP policy > consistencies, and result in the fewest land use, logistical and site > constraints, in addition to ensuring economic feasibility associated > with construction of a WWTP that will be carried forward for further > and more detailed evaluation in the Fine Screening are:

> ① Site 1 - Current WWTP

> ③ Site 15 - Chevron Facility Hillside Site ③ Site 16 - Righetti
> Property The Current WWTP (Site 1), Chevron Facility Hillside Site
> (Site 15), and/or Righetti Property (Site 16) have been determined to
> represent a reasonable range of alternative site locations for
> development of a WWTP that maintains relative economic feasibility. In
> accordance with the proposed Work Plan, and as part of the Fine
> Screening analysis, these three sites will be assessed at a greater
> and co-equal level of analysis and additional technical study
> completed to respond to Coastal staff comments raised during the CCC's
> Substantial Issue Determination.

The summary report is at the end of the agenda at http://www.morrobay.ca.us/archives/54/09 08 11%20JPA%20agenda%20and%20staff%20reports.pdf

The current site has the greatest environmental and LCP policy consistencies? If so, then I think we need to keep looking. I have to wonder if the consultants were given bad information.

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 120 of 363

Madeline Cavalieri

From:Linda Stedjee [Istedjee@charter.net]Sent:Friday, September 02, 2011 7:06 AMTo:Madeline CavalieriSubject:Morro BAy WWTP rough screeningHello,

Once again I am using email as I believe this is a time-dependent issue. After this message, I do not expect to send more email on this situation for awhile, as you and your CCC colleagues are more than capable of handling this.

In my view, it all seems to boil down to some very strange weighting and priorities, as well as what appears to be some significant lack of understanding of the Coastal Act and LCP policies. To me, the "nitty gritty"

of it all focuses on the material following this message, which is near the end of the report at: http://ca-morrobay.civicplus.com/documents/Public%20Services/Wastewater%20Treatment% 20Plant/WWTP%20Upgrade/Rough%20Screening%20Analysis/DRAFT%20Rough% 20Screening%20Evaluation Sept%202011.PD

Linda Stedjee

Environmental and LCP Policy Considerations Ranking

Summary

The top sites that were determined to be most consistent with the environmental and LCP policy

considerations presented in Section 2 are as follows:

Site 13 – Power Plant Hillside Tank Farm (6 consistent criteria)

Site 1 – Current WWTP (5 consistent criteria)

In addition, the following sites (listed in no particular order) displayed equal levels of consistency with

the proposed criteria:

Site 2 – Chorro Valley Site (4 consistent criteria)

Site 12 – CMC Wastewater Facility Site (4 consistent criteria)

Isite 15 – Chevron Facility Hillside Site (4 consistent criteria)

Sites located outside of the designated floodplain, and further away from sensitive public viewing

and/or recreational areas are generally shown to be more favorable for new development from a strict

policy interpretation; however, many of those same sites are hillside parcels that contain steep slopes

and soils subject to significant geologic constraints (i.e., erosion, landslide, etc.), which would make

construction of a new WWTP more expensive based on safety/design requirements, and thus less

economically feasible. Sites that contain existing development on relatively flat topography were also

shown to have minimal environmental resources located onsite and thus displayed a greater level of

consistency with environmental and LCP policy considerations.

Logistics and Site Constraints Ranking Summary

The top sites that were determined to be most consistent with the land use and site logistical considerations presented in Section 3 are as follows:

Site 1 – Current WWTP (10 consistent criteria)

Site 12 – CMC Wastewater Facility Site (8 consistent criteria)

In addition, the following sites (listed in no particular order) displayed equal levels of consistency with

the proposed criteria:

Il Site 2 – Chorro Valley Site (7 consistent criteria)

Il Site 16 – Righetti Property (7 consistent criteria)

Because City and County land use and zoning regulations permit public facilities, including WWTPs, in

most areas with special use or conditional use permits, most alternative sites were determined consistent with these criteria. Sites that provide for development of a WWTP as a permitted or conditionally permitted use in accordance with the certified LCP would not require an LCP policy amendment, which could result in new or additional schedule delays. Further, any site that is already

developed or available for development of a WWTP without the need for private acquisition and/or new

right-of-way access also display a greater level of consistency with land use and site logistical considerations.

Engineering Constraints and Economic Considerations Ranking Summary

As indicated in Section 4, the top sites that display the highest economic feasibility in terms of constructing a new WWTP, including those with the least amount of piping required to convey flows to

the WWTP and lowest energy requirements due to pumping needs as follows:

Site 1 – Current WWTP

Site 7 – Power Plant

Site 16 – Righetti Property

Exhibit 6 A-3-MRB-11-001 122 of 363

Madeline Cavalieri

From: Linda Stedjee [lstedjee@charter.net]

Sent: Thursday, September 15, 2011 3:40 PM

To: Madeline Cavalieri

Subject: Images of interest regarding FEMA flood map revision for vicinity of Morro Bay WWTP Hi,

This image shows the flood map as it existed when Wallace submitted an LOMR to FEMA to revise the flood map for the area of the Morro Bay-Cayucos WWTP: http://morrobayissues.info/fema/currentmap.jpg

This image shows the "area to be revised": <u>http://morrobayissues.info/fema/toberevised.jpg</u> The image was one of many in the documents submitted to FEMA over the course of about a year. This clearly shows that the WWTP area is the target, as does the text in the Wallace recommendation on their flood analysis of the WWTP area done in 2009.

The City floodplain management ordinance and funding agencies require that WWTP

improvements be protected from flooding to the level of one foot above the 100-year flood

elevation. Because of the potential reduction of flood levels relative to the current FIRM, we

recommend that a Letter of Map Revision (LOMR) be applied for, including new hydrology

and new hydraulic analyses. The LOMR process typically takes 3 to 6 months for complex

situations such as this.

This preliminary view of the revised area was submitted with the FEMA LOMR application in the summer of 2010. <u>http://morrobayissues.info/fema/revisedprelim.jpg</u>

Since they work for the City, their actions are going to be directed toward helping the City keep the WWTP where they want it. The revised area shows more of the WWTP in the flood plain than before - all of it in fact, but it does show alternate channels for the flood water to follow, and these were not present in the existing FEMA flood map of the area.

It appears that the amount of territory covered is not as important to the achievement of their objectives as the depth of the flooding, possibly related to alternate channels to disperse flood water - or at least that is how I read this.

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 123 of 363 Madeline Cavalieri California Coastal Commission 725 Front Street, Suite 300 Santa Cruz, CA 95060

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SEP 152011

California Coastal Commission, Central Coast Area

Dear Ms. Cavalieri,

As you may recall, I recently expressed concern that the City of Morro Bay might have been behind the updates to the FEMA maps that cover the vicinity where the Morro Bay-Cayucos WWTP is located. Although the final results do not appear to be favorable to their position, in that their preferred site is now completely within the flood zone, I still wondered if there might be a connection, and whether the final results might differ from what they expected.

While we do not yet know what they expected the changes to be, it is now clear that the map changes were initiated by the City.

On September 4, I sent the following PRA request to the City:

" This is a PRA request - which should be pretty simple to fulfill as the documents are quite recent - no more digging around in the offsite storage.

I would like to see any and all documents that were submitted to FEMA, under the Letter of Map Amendment (LOMA) and Letter of Map Revision-Based on Fill (LOMR-F) Process, that resulted in the Fema Letter of Map Revision Determination posted on the City Web site at http://www.morrobay.ca.us/documents/Public%20Services/Engineering/Draft%20LOMR%208_9_11.PDF"

I just received a letter of response from City Attorney Rob Schultz. I have attached the letter, but am also copying the text in below. I find it odd that the City cannot simply ASK Wallace, whom they paid to do this for them, to print off the documents for me. I also find it odd that they did not keep any of the material in printed format, but only in a format that they cannot read because they do not have the software.

" This correspondence shall serve as a response to your California Public Records Act (CPRA) request dated September 4, 2011 requesting review of all documents submitted to FEMA under the LOMA and LOMR-F Process.

The City hired The Wallace Group to complete this project and has obtained a CD containing documents and data submitted by the Wallace Group to FEMA. Much of the data is created using software owned by The Wallace Group and used for direct transmission to FEMA. It isn't possible for the City to print these documents as we do not have the software, but everything is included in the CD should you have the resources to view it. There are also several PDF documents of correspondence related to the submissions."

I do plan to pursue this matter. If I am unable to persuade the City to obtain a printed version of the documents on the CD, I will see what else can be done to obtain the information from it.

Thank you for your time and your attention to this matter.

Sincerely

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 124 of 363



City of Morro Bay

Morro Bay, CA 93442 • 805-772-6200

September 12, 2011

Linda Stedjee 2428 Birch Street Morro Bay, CA 93442

Re: Public Records Act Request dated September 4, 2011

Dear Ms. Stedjee:

This correspondence shall serve as a response to your California Public Records Act (CPRA) request dated September 4, 2011 requesting review of all documents submitted to FEMA under the LOMA and LOMR-F Process.

The City hired The Wallace Group to complete this project and has obtained a CD containing documents and data submitted by the Wallace Group to FEMA. Much of the data is created using software owned by The Wallace Group and used for direct transmission to FEMA. It isn't possible for the City to print these documents as we do not have the software, but everything is included in the CD should you have the resources to view it. There are also several PDF documents of correspondence related to the submissions.

If you have any questions, please do not hesitate to call.

Sincerely,

lent The

Robert Schultz City Attorney

> ADMINISTRATION 595 Harbor Street

HARBOR DEPARTMENT 1275 Embarcadero Road CITY ATTORNEY 595 Harbor Street

POLICE DEPARTMENT

870 Morro Bay Boulevard

FINANCE DEPARTMENT 595 Harbor Street

> PUBLIC SERVICES 955 Shasta Avenue

FIRE DEPARTMENT 715 Harbor Street

RECREATION & PAEXhibit 6 1001 Kenned WRB-11-001 125 of 363

Madeline Cavalieri

From: Linda Stedjee [lstedjee@charter.net]

Sent: Thursday, September 15, 2011 1:07 PM

To: undisclosed-recipients

Subject: The Morro Bay WWTP project and the FEMA Flood Map revision Hi,

I have sifted through a great deal of information and determined where the idea of a FEMA flood map revision came from. It came from Wallace Group, which got the job of handling the submission. Work on that project seems to have officially begun in the summer of 2010 and ended about a year later.

Wallace Group which, by an interesting coincidence happens to have been hired to comanage the WWTP project, did the 2009 "Morro Bay Cayucos Sanitary District Wastewater Treatment Plant Flood Hazard Analysis". When they did that study, they did so as a sub-contractor to Environmental Science Associates (ESA), which had been hired by the City and the CSD to prepare the DEIR for the WWTP replacement project. (They call it an "upgrade.)

The 2009 study can be viewed at <u>http://www.morro-bay.ca.us/documents/Public%</u> 20Services/Wastewater%20Treatment%20Plant/WWTP%20Upgrade/2009-08-07MBCSD-WWTP%20Flood%20Hazard%20Analysis%20Phase%202% 20Complete.PDF

The 2009 study by Wallace includes these comments:

"To address 100-year flooding issues:

• Construct the new WWTP facilities on higher ground. Construction on elevated fill provides

the highest level of protection and least amount of operational inconveniences.

• Construct all or part of the new facilities on City owned land to the south of the current site

that is already elevated, modeled in the analysis as MB10 through 12. Construction at this

location will have the least adverse flood impact on neighboring properties.

• Reconstruct Atascadero Road with an inverted crown. This will reduce flooding for all properties along the road and nearly eliminate flooding at the high school for all but the most

extreme storm events.

• The City floodplain management ordinance and funding agencies require that WWTP

improvements be protected from flooding to the level of one foot above the 100-year flood

elevation. Because of the potential reduction of flood levels relative to the current FIRM, we

recommend that a Letter of Map Revision (LOMR) be applied for, including new hydrology

and new hydraulic analyses. The LOMR process typically takes 3 to 6 months for complex

situations such as this." (emphasis added)

Hence, it appears that the Wallace recommendation for the FEMA map change request was based on its potential to make the site preferred by the City and the District more acceptable. My initial conclusion is that it appears that the depth of potential flooding may be a major issue behind this move.

On June 7, 2010, Craig A. Campbell of Wallace Group wrote to Thomas Barnes, of ESA, stating that the application and supporting documents for submission to FEMA were complete, and had been sent to Rob Livick, City of Morro Bay, for review and signature.

On July 2, 2010, Debra Tumler, of Wallace Group, sent to FEMA's LOMR Clearinghouse an "Application for LOMR, Morro Creek west of State Route 1, Morro Bay, California." Subsequent to that communication, a number of additional letters and documents were exchanged between FEMA and Wallace Group representatives.

Documents show that the work continued after the November 12, 2010 CCC letter regarding the WWTP DEIR prepared by ESA, even though the CCC letter stated that the DEIR must evaluate alternative locations and that "the analysis needs to be focused on a co-equal evaluation cross the same range of factors"

On August 9, 2011, nine months after the CCC letter was sent to the City and the District the final "Letter of Determination" on the flood plain revision request was received from FEMA. It is currently unknown whether, during this time, Wallace was still reporting to ESA, but the Morro Bay City Attorney's secretary has stated that there is no contract between the City and Wallace for this work, as Wallace performed the task as a subcontractor of ESA.

It appears, from my initial review of the information available, that the FEMA map revision was done entirely on the basis of data submitted by Wallace, a longtime business associate of the City of Morro Bay and the co-manager of the WWTP project.

Interestingly, the agenda for the July 15, 2010 JPA meeting includes a staff report that discusses potential managers for the WWTP project, and recommends Delzeit and Wallace. This material can be seen at <u>http://www.morro-bay.ca.us/archives/54/07_15_10%20JPA%</u> 20special%20agenda%20and%20staff%20reports.pdf

In the staff report, written by WWTP manager Bruce Keopgh, it is stated,

"The review committee believes that Delzeit brought the best project management team with their proposal. Mr. Delzeit will serve in the role of Project Manager. The Wallace Group will provide engineering support services as required. Both have extensive engineering experience with water and wastewater related projects.
Mr. Delzeit brings relevant wwtp upgrade project experience through his involvement in successfully managing a wwtp upgrade project at Pismo Beach using a similar technology in a coastal community.
Mr. Delzeit and the Wallace Group both have extensive experience with large

complex projects

within the Coastal Zone.

□ The Wallace Group is familiar and up to speed on the flood related issues due to their previous work on the environmental review process"

Note that the staff report date – July 15, 2010, falls immediately after the July 2 date of the FEMA flood map revision request sent by Debra Tumler of Wallace Group to the FEMA LOMR Clearninghouse.

As a side note, Wallace has run into some problems in southern San Luis Obispo County, as described in the following local news stories:

"Grand Jury finds conflict of interest with Wallace Group" June 3, 2011 <u>http://calcoastnews.com/2011/06/grand-jury-finds-conflict-of-interest-with-wallace-group/</u>

Wallace found responsible for sewage plant deficiencies July 5, 2011 http://calcoastnews.com/2011/07/wallace-found-responsible-for-sewage-plant-deficiencies/

Employee files fraud lawsuit against Wallace February 24, 2011 http://calcoastnews.com/2011/02/employee-files-fraud-lawsuit-against-wallace/

State finds fraud and deception at sanitation plant January 27, 2011 http://calcoastnews.com/2011/01/state-finds-fraud-and-deception-at-sanitation-plant/

Sanitation district fires second alleged whistleblower February 23, 2011 http://calcoastnews.com/2011/02/sanitation-district-fires-second-alleged-whistleblower/

SLO County to review sanitation district books July 22, 2011 http://calcoastnews.com/2011/07/slo-county-to-review-sanitation-district-books/

Sanitation district under fire for treatment of Hispanic workers February 25, 2011 <u>http://calcoastnews.com/2011/02/sanitation-district-under-fire-for-treatment-of-hispanic-workers/</u>

Today, I borrowed a CD with numerous documents submitted by Wallace to FEMA. It is clear that a very, very large amount of information was sent to FEMA. It is still not known how much taxpayers paid for this service, for which I have thus far been unable to find any reference in any City meeting agendas or minutes. Still looking.....

I have saved many of the documents from the CD on my computer for future reference.

Linda

Exhibit 6 A-3-MRB-11-001 128 of 363 Dear California Coastal Commissioners,

I am writing in regard to several major issues in Morro Bay and one in nearby Los Osos.

- The alternative site analysis done for the Morro Bay-Cayucos WWTP appears to be aimed at supporting the desires of government officials and staff to keep the plant in their favored location, and contains what appears to be some seriously faulty logic and conclusions.
- 2. Some major issues have been identified regarding the recent Morro Bay desalination plant expansion, including failure to do scientific studies and to obtain CDP's that appear to have been necessary and required.
- 3. New evidence has emerged that approves to support the theory that the nitrates in Morro Basin wells come from Morro Bay sewage; not from agriculture.
- 4. Liquifaction concerns have raised new doubts about the controversial Los Osos sewer project.

Morro Bay-Cayucos Alternate Site Analysis

As discussed in the attached Rock of the Coast article, "Strange Logic" (Exhibit 1), The consultants' report identifies three fatal flaws that would disqualify any site from further consideration. One of them is, "Site is located entirely within the 100-year flood hazard zone."

The Dudek consultants' draft report further says, "Similar to the City's LCP, the County's prohibits most new development in floodplains, and specifically prohibits residential, commercial and industrial development within the 100-year floodplain. Several alternative sites identified for the WWTP upgrade project are located within the designated 100-year floodplain; therefore, development of a WWTP facility on those sites would be prohibited under the County's LCP. As such, any alternative site located entirely within the 100-year floodplain is considered to demonstrate a fatal flaw and will not be carried forward for further evaluation."

New FEMA flood maps received and published by the City of Morro Bay BEFORE the consultants issued their draft report clearly show the entire site within a 100 year-flood plain. An image in the attached article (**Exhibit 1**) clearly demonstrates that fact. Yet, the consultants chose to include the old FEMA map in their study, and the site favored by Morro Bay and Cayucos officials and their staffs was not disgualified from consideration.

The consultants' report states, "It should be noted that the City's LCP anticipates protection of the existing WWTP facilities in their present location as a coastal-dependent use. Additional study is required to demonstrate consistency with the City's LCP in this regard and, therefore, the existing WWTP site will be carried forward for rough screening analysis irrespective of the 100-year floodplain location at the current WWTP site."

The consultants clearly had access to the report that your CCC staff wrote regarding the DEIR for this project, and it was mentioned in the public workshop. In that report, it is stated, *"Finally, the DEIR cites LCP Policy 5.03, which allows for protection of the existing WWTP at its current location because the ocean outfall line is coastal-dependent. Please note that this policy does not apply to the project which is currently being proposed because the project is for construction of a new WWTP."* It appears that that the consultants chose to ignore what the CCC staff said.

Interestingly, the PG&E property east of Highway 1, while considered by many to be an ideal site for the new WWTP, was disqualified by the consultants for lying within a flood plain. This action is puzzling to residents who note that the PG&E property lies at a considerably higher elevation (it looks to me like the difference is at least 10-15 feet) than the current WWTP site and the Dynegy power plant property immediately across the highway. The latter were both chosen by the consultants for further study. Some longtime residents also note that the PG&E property floods only in one corner, and only to a minor degree.

For these reasons, it appears to some residents that the consultants' report appears to have been heavily influenced by local government officials and their staffs, and does not provide the independent, reliable alternative site analysis mandated by the CCC.

The reasons why local government is so determined to keep the WWTP where it is have been the subject of considerable speculation by residents. Many believe that a huge development project proposed for power plant property, <u>and its need</u> for water, are at the heart of the matter.

Exhibit 6 A-3-MRB-11-001 129 of 363 As you know, the State of California will not allow any major development unless the would-be developer can guarantee a long-term source of water. The City of Morro Bay has very serious water supply problems. The City can scarcely supply enough water for its current residents and visitors. This proposed project would bring several thousand more workers and visitors into town every day – and new residents as well.

By keeping the WWTP at its current location, local government officials and staff would be keeping a potential source of reclaimed water – a LOT of reclaimed water – close to, if not within, the proposed development site.



To the left is the site diagram from the Dudek alternate site rough screening report. The current WWTP is located in the upper left corner of the image, as indicated by the red lines (which I added to the original image). The Morro Dunes RV Park, which provides facilities for our visitors, and affordable, low-cost housing for permanent residents, is directly below (south of) the WWTP site.

The proposed power plant property development would completely transform the site and the City of Morro Bay. A "master plan" for the development was proposed two or three years ago and presented by Tom Fee. At the time, the name of his firm was Westpac Energy Group. It is now called Ecobaun.

Many residents felt that It was clear that a huge amount of money had been spent coming up with this plan, and that nobody would have spent that much money unless they were in contact with local officials who were assuring them that their plans could be implemented. The Ecobaun Web site even describes the assembled project team.

A colored artist's rendering, which was superimposed over an aerial view of the power plant vicinity, shows the nearly the entire power plant property, along with the adjoining RV park and the WWTP property, as part of the new development.

you would like to see the material, please visit the ecobaun.com Web site.

To locate the image of the proposed project:

- Click on "Project" on the left side of the Ecobaun home page;
- On the right side of the next page, click on the image of Morro Bay. That will take you to a page titled, "The Plant".
- On that page, click on the link titled, "Overview", you will then be taken to a page that describes the project at a high level.
- On that page, click on "Master Plan", and that link will take you to the page where the image is located. It is necessary to click on the map to view the full-sized artist's rendering of the proposed project.

As you will see, the proposed project appears to have completely swallowed up the Morro Dunes RV park and our current WWTP site. Even if that was some kind of error by the artist, the current WWTP site would be immediately adjacent to the proposed development.



In the image to the left, the developer's proposed project, signified by the green lines, is shown as an overlay on the image above. Note that the solid green lines show how it would look if the developer actually did intend to take over and develop the current WWTP site. The dotted green lines indicate where the northern development site boundary might be if that were not the case.

As you may recall the would-be developer, Ecobaun, formerly Westpac Energy Group, is believed to be part of the huge, Australia-based Westpac Financial conglomerate's network of companies, which have major development interests and around the world. They have significant interests in San Luis Obispo County.

Ecobaun Senior Manager Tom Fee has denied any connection to the Westpac conglomerate, but information in a July 8, 2009 New Times article, "Big Plans For Morro Bay", by Patrick Howe appears to conflict with that claim:

"In response to requests for more information by a planning commissioner, Fee said his company has "no affiliation to" the WestPac Development Company that A-3-MRB-11-001

130 of 363

has built and promoted several development projects in San Luis Obispo or any others that share the name.

Despite the assertion, the companies appear to have numerous ties. For one thing, when a New Times writer called Fee, the office phone had been forwarded to a cell phone of Kari Hamilton, an accountant for WestPac Investments, which is affiliated with Westpac Development Corp. Asked about the connection, Hamilton repeated that there is "no affiliation" between the companies but allowed that Fee formerly worked for WestPac Development. She also said a former partner in the energy group did work with the other WestPac companies."

Interestingly, a VERY short time after Morro Bay residents confronted the City Council with their findings regarding the Westpac connections, Westpac Energy Group abruptly changed its name to Ecobaun.

As previously noted, all of this has led quite a few residents the conclusion that the whole WWTP site issue is closely connected to plans for the huge power plant property development project. That development could, with the help of local governments, gain control over reclaimed water from our WWTP in order to guarantee the necessary long-term water supply. This would, of course, be detrimental to residents in our already-water-starved town. Residents believe the reclaimed water should be used to provide a more secure water supply for Morro Bay's CURRENT population and our visitors/tourists who come here to enjoy the coast – and, obviously, that the WWTP needs to be sited in accordance with the Coastal Act, our LCP, and other common sense considerations.

Morro Bay Desalination Plant Expansion

The attached article, "Morro Bay Desalination Plant Concerns: Questions Raised Regarding Permit Issues and Plant Expansion" (**Exhibit 2**) discusses a number of concerns regarding the recent plant expansion. The expansion involved installation of two 450 gpm brackish water reverse osmosis (BWRO) trains to remove nitrates from water from the City's Morro Basin wells. Among the concerns are these:

1. Although the 2009 expansion tripled the plant's output capacity from 400 gallons per minute (gpm) to 1,300 gpm, the project was declared categorically exempt from CEQA.

The declaration (**Exhibit 3**) describes the project as, "Desal energy recovery system and brackish water treatment train installation at 176 Atascadero Rd. w conditions." The Declaration states the reason for exempt status to be "Minor alterations which do not increase the capacity of the system and are necessary for health protection." A copy of the declaration is attached.

- There is only one CDP in force. That is the one issued in 1993. It appears that no others have been issued since then. However, plant capacity increased, the original water delivery line was replaced with a much larger one, and the expansion of the plant results in increased discharges of brine and cleaning chemicals.
- 3. There has been only one EIR, which was done in 1993. It does not appear that any further environmental studies have been done.
- An individual NPDES discharge permit was replaced with a general permit and a City of Morro Bay permit that involve less monitoring oversight.
- An LCP amendment ordered by the CCC states that the City will obtain the necessary permits to allow the facility to be run for routine water replacement (It was originally built as a temporary emergency facility). It appears that no such permits were ever obtained.
- There is significant evidence that suggests that the nitrates in the City's Morro Basin wells are from leaking sewage, not agriculture, as the City claims. Some residents think the money spent on the BWRO trains should have been spent to fix the sewer lines.

New Evidence that Nitrates in Morro Basin Wells Come From Sewage

The new evidence consists of well test data from a Morro Bay Mutual Water well on power plant property. It is only a few hundred feet from the City's Morro Basin wells. While the City well tests consistently show high nitrate levels, the tests of the Morro Bay Mutual Water well consistently show very low nitrates.

The wells are all located west of Highway 1, south of the Morro Basin Aquifer narrows, and draw their water from the exact same source. However, the City wells are closer to the alleged sewage source, and pump a great deal more water, which would tend to pull exfiltrated sewage in their direction, preventing it from ever reaching the Morro Bay Mutual Water well. The attached article, "Nitrates in Morro Bay Municipal Wells – New Facts Emerge" (Exhibit 4), provides detailschibit 6

Following is the table that shows the well test results:

Year	Well System	Sample Date	Nitrate level
2002	City of Morro Bay	10/21	47
		11/12	71
	Morro Bay Mutual Water	11/20	10
		12/26	8.7
2005	City of Morro Bay	9/20	27
		11/15	57
	Morro Bay Mutual Water	6/30	1.4
2006	City of Morro Bay	1/18	47
		6/6	46
		10/17	49
		11/20	84
		11/27	86
	~	11/28	84
		11/29	80
	• · · ·	11/30	80
		12/1	77
		12/4	81
		12/5	81
	Morro Bay Mutual Water	12/13	10
2007	City of Morro Bay	5/2	49
		5/7	55
		11/19	100
	Morro Bay Mutual Water	6/5	7.9
2009	City of Morro Bay	8/4	69
		9/15	73
	· · · · · · · · · · · · · · · · · · ·	10/6	72
	Morro Bay Mutual Water	7/14	3.3

Los Osos Sewer Project Liquifaction Concerns

As a former Los Osos resident, I can say from first-hand experience that aside from a VERY a thin layer of topsoil, much, if not most of Los Osos is built on pure beach sand. Having moved to the Central Coast from the San Francisco area l am quite familiar with earthquakes and the problems of liquefaction.
I believe it is clear that Los Osos will, at some time in the not-too-distant future, be rocked by another earthquake. I lived there during the last one, and my house was shaking far worse than anyplace I ever was in during the quakes that occurred during the 42 years that I lived in the Bay Area.

I strongly believe that building a gravity sewer in Los Osos is an absolutely ridiculous idea, and that the result will be horrendous pollution of the groundwater when the next big quake occurs. I have attached an article, "The Liquifaction of Los Osos" (Exhibit 5), by Ed Ochs. In the article, Ochs presents a significant amount of evidence that the Los Osos sewer project needs to be halted, and a safer, more intelligent approach taken. The information in the article is, I believe, critically important and well worth reading.

I also believe that Los Osos has long been unfairly blamed for the pollution of the Bay and the Ocean. I believe that most of the sewage pollution there comes from seriously-dilapidated sewer lines in Morro Bay and Cayucos.

Many of us believe that the Los Osos sewer project has been made as expensive as possible for the sole purpose of driving out what some developers and their cronies call "the riffraff". In fact, when I first moved to Los Osos, a woman who lived in one of the more expensive neighborhoods told me, "We'll get rid of the riffraff when the sewer goes in. They'll never be able to afford it."

When these people refer to "riffraff", they appear to be talking about the families and retired people with modest incomes who live in the town. The plan, as stated by one developer, is to drive out these people, buy their homes for bargain-basement prices, raze those homes, and build big, expensive ones for the wealthy.

So, it appears to many people that the developers (and their cronies in government) who expect to profit from this scheme are wreaking havoc on the financial security of Los Osos residents, and setting the scene for an environmental disaster of enormous proportions. That disaster will occur when the new gravity sewer comes apart in the next quake, and leaks massive amounts of sewage into the ground right next to the Bay.

If there is anything the CCC can do to get this project on more sensible course, I strongly urge you to intervene. The current course can only lead to environmental disaster, and can only benefit a few people who stand to make many, many millions at the expense of Los Osos residents, and the rest of us who will be impacted by the massive sewage leaks.

As always, thank you for considering the concerns of Morro Bay residents.

Sincerely,

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442 Istedjee@charter.net

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SEP 142011

California Coastal Commission, Central Coast Area

cc: Madeline Cavalieri

Exhibit 6 A-3-MRB-11-001 133 of 363

From rockofthecoast.com

EXHISIT 1

STRANGE LOGIC: Morro Bay and Cayucos Are Still Apparently Determined to Build a New Wastewater Treatment Plant in a Flood Zone

When is it OK to build critical municipal infrastructure in a floodplain? Some appear to believe that the answer is, "When the Cayucos Sanitary District (CSD) Board, Morro Bay City officials, their staffs, and their paid consultants say so". The CSD Board, Morro Bay's Mayor and City Council and their high-ranking staff members have fought long and hard to ensure that the new Morro Bay-Cayucos wastewater treatment plant (WWTP) will be built at their favored site, despite serious problems that include risks posed by potential flooding.

The Draft Environmental Impact Report (DEIR) for the project was found seriously wanting by California Coastal Commission (CCC) staff. They issued a <u>12-page report</u> that pointed out major project flaws, including the fact that the site preferred by the City and the CSD lies within a 100-year floodplain. Because of the serious problems that were identified, the CCC took over the permitting process to help ensure a better project outcome.

One of the CCC-imposed project requirements is a thorough study of alternative sites for the new WWTP. The City and the CSD hired Dudek, a consulting firm headquartered in Santa Barbara, to do the analysis. The result was the recently-published <u>"DRAFT Rough Screening Alternative Sites Evaluation"</u> dated September 2011.

The consultants initially reviewed 17 potential WWTP sites, most of which were suggested by residents. They eliminated six sites for what the consultants determined to be "fatal flaws".

The consultants' report describes the "fatal flaws" as follows: "For this analysis, three (3) fatal flaws were determined to be prohibitive of new public facility development within the City, or on unincorporated lands within the County, in accordance with the City and County's Local Coastal Programs (LCP), California Coastal Act, and other applicable regulations, as follows:

- Site consists entirely of prime agricultural land;
- Site contains environmentally sensitive habitat area (ESHA) such that development outside of the habitat and buffer areas would not be feasible; and/or
- Site is located entirely within the 100-year flood hazard zone."

With regard to the San Luis Obispo County LCP, the consultants say, "Similar to the City's LCP, the County's prohibits most new development in floodplains, and specifically prohibits residential, commercial and industrial development within the 100-year floodplain. Several alternative sites identified for the WWTP upgrade project are located within the designated 100-year floodplain; therefore, development of a WWTP facility on those sites would be prohibited under the County's LCP. As such, any alternative site located entirely within the 100-year floodplain is considered to demonstrate a fatal flaw and will not be carried forward for further evaluation."

New <u>Federal Emergency Management Agency (FEMA)</u> maps that become effective in December 2011 appear to indicate that the entire WWTP site favored by City and CSD officials and staff lies within a floodplain. This diagram, published in the project EIR, shows the proposed location of the new WWTP. It lies adjacent to, and partially overlaps the site of the existing WWTP.

Exhibit 6 A-3-MRB-11-001 134 of 363



This diagram is a portion of one of the new <u>FEMA flood insurance rate map published on the City of Morro</u> <u>Bay web site</u>. The blue dots indicate a 100-year floodplain. Despite claims by the consultants that the site is only partially within the floodplain, the FEMA map appears to indicate otherwise.



Yet, in spite of what the FEMA map shows, and although the consultants assert that location within a "100-year flood hazard zone" is a "fatal flaw", on page 11 of their report, they state, "It should be noted that the City's LCP anticipates protection of the existing WWTP facilities in their present location as a coastal-dependent use. Additional study is required to demonstrate consistency with the City's LCP in this regard and, therefore, the existing WWTP site will be carried forward for rough screening analysis irrespective of the 100-year floodplain location at the current WWTP site."

This position is in complete opposition to the one presented in the CCC staff's comments on the project: *"Finally, the DEIR cites LCP Policy 5.03, which allows for protection of the existing WWTP at its current location because the ocean outfall line is coastal-dependent. Please note that this policy does not apply to the project which is currently being proposed because the project is for construction of a new WWTP."*

Exhibit 6 A-3-MRB-11-001 135 of 363 However one chooses to interpret the wording of the policy in the City's LCP, concerned Cayucos and Morro Bay residents assert that it all boils down to a simple fact: It is not smart to spend tens of millions of taxpayer dollars to build new critical infrastructure in a flood zone. So why, they ask, is this even being considered?

Many questions have been raised, many more will be raised, and the long fight over the location of the Cayucos-Morro Bay WWTP appears to be far from over.

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Exhibit 6 A-3-MRB-11-001 136 of 363 Print

EXHIBIT 2

Written by Linda Stedjee Saturday, 10 September 2011 15:42

MORRO BAY DESALINATION PLANT CONCERNS: Questions Raised Regarding Permit Issues and Plant Expansion

The City of Morro Bay desalination plant is used to treat seawater from offshore wells near the Embarcadero and groundwater from the City's Morro Basin well field. Treated water is delivered to the City's drinking water distribution system.

Several aspects of plant operation have been sources of concern to Morro Bay residents. Concerns focus on permit issues, alleged environmental damage, and the possibility that \$3 million spent on a major plant expansion would have been better spent for other purposes.

Originally, the plant treated seawater, and had a 400 gallons per minute (gpm) capacity. In 2009, two 450 gpm brackish water reverse osmosis (BWRO) trains were installed to remove nitrate contamination from well water. The new equipment substantially increased the plant's total capacity to 1300 gpm when both seawater and well water are being treated simultaneously.

The plant expansion has riled a group of City residents, who say that the City has spent several million dollars dealing with a symptom of a problem instead of dealing with its source. The activists have been trying, for several years, to convince City of Morro Bay officials to investigate the possibility that nitrates contaminating City wells come from sewage that is leaking from the City's dilapidated collection system.

The residents assert that the plant expansion, which cost taxpayers about \$3 million dollars for construction, and resulted in increased ongoing water treatment costs, was a misuse of taxpayer money. They believe that the money would have been better spent fixing the leaky sewer lines that they believe are the true source of the nitrates.

Meanwhile, City officials and staff hold to their stated view that the nitrate contamination in Morro Basin wells comes from fertilizer used in agricultural operations in the Morro Valley. They have declined to conduct specific groundwater and well tests requested by residents. The residents believe the tests will establish, once and for all, that leaky sewer lines; not farming operations, are contaminating the City wells, the Bay and the ocean.

Also at issue are residents' allegations that plant operations might be compounding the environmental damage done by leaking sewage. The allegations are based on the City's failure to obtain Coastal Development Permits (CDP's) for the desalination plant expansion work. The plant is still operating under a CDP issued in 1993 before the expansion that more than tripled the plant's production capacity. Questions have also been raised regarding a National Pollution Discharge System (NPDES) permit and a Commercial Users' permit issued by Morro Bay-Cayucos WWTP management.

Plant History

The Morro Bay desalination plant was constructed in 1992, during a drought emergency, as a "temporary emergency" facility. The plant was used for only a short time and then was shut down due to high operating costs. It was not used again until 1995, when it was again operated briefly during a drought. Equipment problems caused by iron in the incoming seawater caused the plant to be shut down again, and it was seldom used until 2009, when it was expanded with the installation of the BWRO trains to remove nitrates from well water, and an energy recovery system to reduce operating costs.

The City received \$600,000 in Proposition 84 grant funding to help pay for the plant expansion which, according to a County document, cost about \$3 million. The grant was issued through the California Department of Public Health (CDPH).

Upon completion of the upgrades, the plant was capable of treating seawater and well water simultaneously through separate processes. The expanded production capacity required the City to up-size the water line that delivers treated water to the City's drinking water distribution system.

The need for the larger delivery line, which has been installed, was discussed in a January 25, 2011 City staff report written by Capital Projects Manager Dylan Wade. The report indicated that production of treated groundwater had to be restricted because the pipeline that existed at the time did not "... have the capacity to transport the maximum production rate of treated groundwater, let alone to transport both treated groundwater and converted seawater simultaneously". Some residents have expressed concern that the installation of the larger delivery line was done without a new CDP, which they believe was required.

> Exhibit 6 A-3-MRB-11-001 139 67366 12:02 PM

Since the completion of the expansion project, the plant has been used much more than it was in past years. The City relied heavily on the plant during the 2010 drought emergency when State Water Project deliveries were drastically cut. According to the City's 2010 Urban Water Master Plan, the plant's BWRO system "acted as the primary water supply source for the City during the first 3 months of 2010 when SWP deliveries were at 5 percent." And, "The City currently relies on the BWRO facility to manage peaking demands during SWP deliveries, and as the City's main water supply source during SWP shutdowns and interruptions in deliveries."

California Environmental Quality Act Issues

The desalination facility operates under CDP 57-92, which was approved by the Morro Bay City Council on April 12, 1993. The California Environmental Quality Act (CEQA) "determination" for the permit is provided by an environmental impact report (EIR) approved by the City Council on the same date. The Morro Bay 2010 Urban Water Master Plan states that the City adopted a "final" EIR in April, 1993.

Statements in the 1993 EIR appear to indicate that it was not intended to cover a major plant expansion, and that new environmental studies and perhaps a new EIR were necessary. On page 6-10 of the EIR document is the statement, "The potential environmental impacts associated with the continuous operation of the desalination facility to provide a permanent supplemental source of water is evaluated in this section. This alternative would limit the size of the facility to four reverse osmosis units, thus restricting the maximum output of the desalination facility to 648 afy."

On page 6-18, under the heading, "6..4.5 Expanded Permanent Desalination Facility", is this statement: "This alternative would increase the capacity of the desalination facility by doubling the number of reverse osmosis units to eight, thus providing a water supply source capable of producing 1548 afy. This could be used as a replacement or supplemental source of water. Should this alternative be selected, supplemental CEQA compliance would be required prior to project approval (CEQA 15162). This would include further evaluation of noise, marine biologic, marine water, recreation, energy, and public health impacts dependent upon the final location of water discharge." (emphasis added)

While the facility expansion did not specifically "increase the capacity of the desalination facility by doubling the number of reverse osmosis units to eight", it did substantially increase capacity in a similar way, with the addition of the BWRO trains. According to a County document that provides an overview of area groundwater resources, the plant's seawater treatment capability is 645 acre feet per year (AFY) and "the BWRO system is capable of treating the entire 581 AFY of Morro Basin groundwater that the Morro Bay can extract by permit." Thus, the expanded plant could potentially produce a total of 1226 AFY annually. In addition, because the plant has a 400 gpm seawater treatment capacity and 900 gpm brackish water treatment capacity, and because both processes can operate simultaneously, the total gallons-per-minute capacity has more than tripled.

For these reasons, it appears that the 2009 facility expansion may fall within the EIR definition of "Expanded Permanent Desalination Facility", which would indicate that the project was not exempt from CEQA, and that new environmental studies should have been done.

However, on July 10, 2008, the City of Morro Bay filed a "Notice of Exemption" with the County of San Luis Obispo for the desalination plant upgrade project. The project was described in the Notice as, "Desal energy recovery system and brackish water treatment train installation at 176 Atascadero Road." According to the Notice, which identifies the project manager as Morro Bay Capital Projects Manager Dylan Wade, the project was "categorically exempt" from CEQA because it consisted of "Minor alterations which do not increase the capacity of the system and are necessary for health protection." (emphasis added)

Other factors that suggest a new EIR may have been needed include changes in local conditions, and updates to environmental protection law since the 1993 EIR was written. The Morro Bay National Estuary was established in 1995, and the Morro Bay State Marine Recreational Management Area and Morro Bay State Marine Reserve were established in September 2007 by the California Department of Fish & Game. In addition, CEQA guidelines have been updated since 1993.

A Brief Overview of the Recent Amendments to CEQA Guidelines, by Brenna Moorhead, covers several significant changes, including updates that expand the scope of required EIR content. Moorhead states, "Amendment of section 15126.2(a) requires that an EIR analyze the significant effects of bringing development and people to the affected area. The EIR should evaluate impacts associated with locating development in areas susceptible to hazardous conditions such as floodplains, coastlines, and wildfire risk areas. The amendments clarify that areas susceptible to hazards include those affected by climate change, and the effects of GHG emissions might include flooding, sea-level rise and wildfires. These should be

Exhibit 6 A-3-MRB-11-001 19381/d206312:02 PM considered in the project EIR in a manner consistent with the probability of the potential hazard." The desalination plant is located immediately adjacent to the wastewater treatment plant, for which issues regarding potential flooding and tsunami damage have recently been raised.

Coastal Development Permit Issues

The April 12, 1993 CDP was the only permit of that type that was provided in response to a California Public Records Act (PRA) request for "all Coastal Development Permits that the City obtained for construction of and upgrades to the desalination plant and its infrastructure, including the CDP for the installation of the pipeline from the desalination plant to the power plant outfall." A subsequent request was answered by the Morro Bay City Attorney, who stated, in part, "The CDP permit that was obtained from the Coastal Commission has already been provided to you." This appears to indicate that the expansion project was conducted under the 1993 CDP, which was issued for a "temporary emergency" plant with a 400 gpm seawater treatment capacity.

The California Coastal Act requires a CDP for new development. The desalination plant expansion project involved not only a major capacity increase through installation of the two new BWRO trains, but substantial up-sizing of the treated water delivery line, and an increase in the amount of brine discharged into the power plant outfall. In addition, a 2009 WWTP Commercial Users permit was issued for sewer discharge of water containing cleaning residues. This type of plant waste has always been discharged to the sewer. However, with the addition of the two new BWRO trains that need to be cleaned periodically. increased sewer discharges would be expected. It appears that one or more new CDP's may have been required, but that they were not obtained.

According to the California Coastal Act, "Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511)."

The plant's water treatment capacity increase and the up-sizing of the treated water delivery line appear to fall under the portion of the Coastal Act development definition that refers to, "... construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility ..."

The BWRO trains that treat the well water produce brine. That brine, together with the brine produced by seawater treatment is, according to past and existing permits, discharged into the power plant outfall.

The brine discharge increase appears to fall under the portion of the Coastal Act development definition that states, "...on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste ... " This may also be true of increased sewer discharges produced by cleaning and maintenance of the BWRO trains.

In fact, under the heading "Summary of Potentially Required Permits, Approvals, or Authorizations for Continued Facility Operation", the 1993 EIR lists the Coastal Commission as a "responsible agency", and indicates that a Coastal Development Permit may be required for "seawater wells and discharge components located within the Coastal Zone."

National Pollution Discharge Elimination System Permit Issues

The Morro Bay desalination plant currently discharges brine to the Morro Bay power plant outfall at the foot of Morro Rock. The discharge is allowed under Monitoring and Reporting Program R3-2006-0063, General National Pollution Discharge Elimination System (NPDES) Permit CAG99301, which is administered by the CCRWQCB and covers discharges with low threat to water quality.

From 1994 to 2009, the City held NPDES permit C0049697, which allowed brine discharges of up to 830,000 gpd into the power plant outfall. The permit was renewed on time, as required by the CCRWQCB. The permit required that the desalination plant operators conduct extensive monitoring to ensure that permit conditions were being met.

On September 22, 2009, during the plant expansion, the City submitted a request to rescind permit C0049697, and to cover the

Exhibit 6 A-3-MRB-11-001 189167086312:02 PM power plant outfall brine discharges under CCRWQCB General Permit CAG99301 which requires less oversight than an individual permit. The General Permit covers a number of discharging agencies and locations.

General Permit Attachments B and E specify detailed permit conditions that include monitoring and reporting requirements. Attachment D, "Low Threat Water Quality Criteria", specifies limits for the amounts of volatile organic chemicals, semi volatiles, pesticides, and inorganics, and under the heading, "other parameters", lists limits for acute toxicity, chronic toxicity, phenolic compounds, chlorinated phenolics, tributylin, and TCDD equivalents. There is no mention of monitoring of brine concentrations and dilution.

Because of the expansion of the plant capacity, and the resulting increase in brine when the plant is treating large quantities of water, a greater quantity of brine must be disposed of. The terms of inclusion for the City's desalination brine discharges under General Permit CAG99301 provide for an increase in discharge amount. The increase raises the discharge limit from a maximum of 830,000 gpd to a maximum discharge "less than" 900,000 gpd and "less than" 27.900,000 gallons per month.

It does not appear that the CCRWQCB required CEQA studies to determine the potential environmental impact of increased brine discharges. As previously noted, the City declared that the plant expansion was categorically exempt from CEQA.

WWTP Commercial Users Permit Issues

At times, the desalination plant discharges industrial waste into the City's sewer system. Those discharges are covered by a "Commercial Users Permit" issued in 2009 by WWTP management. These discharges do not have to travel far through the sewer, as the desalination plant is located next door to the WWTP.

On 3/31/09, Dylan Wade, Morro Bay Capital Projects Manager, applied to Morro Bay-Cayucos WWTP management for a discharge permit. The permit was granted – essentially by the City, to the City. The permit application indicates that discharges to the sewer include "chemical cleaning residuals" and "unpolluted industrial process water".

A discussion of the cleaning process that produces the residuals referred to in the application is included in a Cal Poly study, "Economic Analysis of Reverse Osmosis Desalination of Water for Agricultural Irrigation Applications", by Ashley Hemping: "Brackish groundwater enters the facility and is first treated with antiscalants, before being pumped at 600 GPM to two pre-fabricated GE Water & Process Technology trains, which desalinate the water at 200 psi. The brackish water has a TDS approximately 20% that of the seawater, or around 700 ppm. The system is able to produce 450 GPM of permeate, at a recovery rate of 75%. The BWRO system, similar to the SWRO system, sends permeate to be post-treated with calcium carbonate and chlorine, with the concentrate returning to the sea. Periodic maintenance of both systems is performed using a detergent or citric acid, to treat biofouling or scaling, depending on the type of buildup. These cleaning agents will be returned to the ocean with the concentrate, and should be monitored closely due to the potential environmental impact (Boucher 2009)." (emphasis added)

The desalination plant's old NPDES permit, number CA0049697, stated that, "wastewater generated by the desalination plant includes: "concentrated seawater brine and an influent pretreatment chemical called Foocon." The permit authorized the City to discharge 830,000 gallons per day of wastewater brine, along with water treatment chemicals from the facility, into the power plant outfall. The permit also specified that "Filter backwash and process cleaning solutions will be discharged to the municipal sewer system."

The plant's new NPDES permit, General Permit number CAG99301, evidently regulates only the discharges into the power plant outfall and does not include sewer system discharges. There is just one discharge location specified in the "Notice of Intent" associated with CAG99301. It is the "Dynegy Morro Bay Power Plant Outfall (APN#066-461-011)."

However, some confusion has resulted from content of a news article, "Desal Plant Gets Permit", published in the January 21-27, 2010 issue of the Bay News. The article, written by Neil Farrell, states, "Morro Bay will continue to be able to use its desalination plant, after the Regional Water Quality Control Board in December approved new 5-year discharge permit for the seldom-used facility on Atascadero Road. The permit allows the city to discharge briny water created during the reverse osmosis filtering process into Estero Bay about a half-mile offshore and north of Morro Rock." The confusion is created by the fact that the power plant outfall, while located north of Morro Rock, is immediately adjacent to the Rock. The only potential effluent discharge point located "about a half mile offshore" would be the wastewater treatment plant outfall.

If the General NPDES Permit does not cover the discharges into the sewer system, then it appears that they may only be regulated by the Commercial Users permit. Because the City granted that permit to itself, the sewer discharges do not appear to be subject to any outside oversight.

> Exhibit 6 A-3-MRB-11-001 1940102036312:02 PM

EIR section 3.13.1.2 states, "Other effluents to be periodically discharged from the facility to the sanitary sewer include: filter backwash, dilute process cleaning solutions FloClean IPA 411, citric acid, and sodium metabisulfite ...Approximately 1,000 gallons of cleaning solution are used for each RO train. The cleaning solution is flushed through the trains using an equal volume of freshwater. Thus, a total of 2,000 gallons of cleaning solution is generated during maintenance at each RO train."

The 1993 EIR does not appear to cover the potential impacts of discharging increased amount of cleaning solutions needed to maintain the new BWRO trains added in 2009, and according to the Cal Poly study, "Periodic maintenance of both systems is performed using a detergent or citric acid, to treat biofouling or scaling, depending on the type of buildup. These cleaning agents will be returned to the ocean with the concentrate, and should be monitored closely due to the potential environmental impact (Boucher 2009)."

These facts could indicate that the 2009 issuance of the WWTP Commercial Users permit is not sufficient, and that new environmental studies might be necessary to address the sewer system discharges produced by the expanded plant.

Other Permit Concerns

Some desalination plant permit requirements are dictated by the City's Local Coastal Plan (LCP). On May 14, 1992, the Coastal Commission issued a requirement that the City, "Submit a Water Management Plan as an amendment to the Local Coastal Program in the event the city decides to transform the temporary emergency desalination facility into a long-term facility." In 1995, the required amendment, in the form of LCP Policy 3.08, was added to the City's LCP.

Policy 3.08 includes this statement: "The City shall apply for and obtain permits to allow operation of the existing desalination facilities as a source of routine replacement water. With the high energy consumption of desalination, it is expected that the facilities will be operated intermittently once State Water is available. The main purpose of the facilities will be to make up for shortfalls in State Water and/or groundwater during droughts and blending to meet the City Council's established minimum** water quality standards, so long as those standards are consistent with the State Department of Health Service potable drinking water standards." The permits should allow use of the facilities at the discretion of the City, so that the City can utilize all of its water supply options without declaring a water emergency."

While the policy states that, "The City shall apply for and obtain permits..." It does not specify the nature of those permits, and thus does not indicate whether another CDP was required to allow the City to change the usage of the plant from "temporary emergency" to "routine".

The meaning of policy 3.08 appears to have been misinterpreted by the authors of the City's 2010 Urban Water Master Plan. The plan includes the following statements: *"In 1995 the California Coastal Commission approved Morro Bay LCP Amendment LCP 1-94 allowing the desalination plant to operate "as needed to ensure that the City's minimum water quality standards are met, as routine replacement, and to offset drought conditions." The LCP requirement that the City update its Water Management Plan every 5 years is met through the update and review of the City's Water Management Plan." (From 2010 urban water management plan)*

However, LCP Policy 3.08 does not state that the City is allowed to operate to provide routine replacement of water and to offset drought conditions. Rather, the amendment states that permits to allow that usage must be obtained: "The City shall apply for and obtain permits to allow operation of the existing desalination facilities as a source of routine replacement water."

When asked to produce these permits, the City provided a permit issued by the California Department of Health, and NPDES permits that were issued by the Central Coast Regional Water Quality Control Board (CCRWQCB). None appears to specifically address the issue of altering plant use from "temporary emergency facility" to a facility to be used as a "source of routine replacement water".

Was the Desalination Plant Expansion the Best Use of Taxpayer Dollars?

Some Morro Bay residents believe that the nitrates in the Morro Basin wells come from leaking sewage and that the money spent expanding the desalination plant would have been better spent fixing the sewer lines. Despite repeated requests from Morro Bay residents, the City has thus far declined to perform the kind of groundwater tests that the residents believe would definitively show whether sewage is, or is not the source of the Morro Basin well contamination.

Much has been written about the condition of Morro Bay's sewer system. In October, 2007, Morro Bay residents Richard

Exhibit 6 A-3-MRB-11-001 1%/16/206B12:02 PM Sadowski and Marla Jo Bruton issued a report, "Condition of the Morro Bay Wastewater Collection System - Video Inspection Review and Analysis". The report was based on their review of several miles' worth of City video inspections of sewer lines throughout Morro Bay. Sadowski has considerable experience in sewer collection system management, and holds a California Water Environment Association (CWEA) level 4 collection system operator certification — the highest level of certification available.

According to Sadowski and Bruton, their research revealed that, on average, every 11.4 feet there is an opening in the lines through which sewage can leak into the ground. In 2008, The Rock featured the article, "Clear Damage -- The Dire Condition of Morro Bay's Wastewater Collection System". That article, which includes photos from a City video inspection of the Main Street trunk line, was followed in 2010 by the SLO Coast Journal article, "The Condition of Morro Bay Sewer Lines".

In April 2008, Sadowski and Bruton produced another report, "the Morro Basin Nitrate Study: Issues and Concerns." That report addressed resident concerns regarding the content of the City's "Morro Basin Nitrate Study", which states that the nitrates in Morro Basin wells come from fertilizer. Sadowski, Bruton, and their consulting chemist disagreed with that conclusion, and stated their belief that there is significant evidence that the nitrates in the wells may come primarily from sewage.

A September 2011 SLO Coast Journal article, "Nitrates in Morro Bay Municipal Wells – New Facts Emerge", presents new evidence, published online after the Sadowski-Bruton report was written. The article asserts that the nitrates in the wells may not come from agriculture, stating, "While the tests run on city well water consistently show high nitrate levels, newly published test data for a nearby private well show very low nitrate levels. Yet, both well systems get their water from the same source – the Morro Basin aquifer."

The SLO Coast Journal article also describes the Sadowski-Bruton report theory on the manner in which sewage could have found its way into city wells. The article states, "In a report section titled, 'Suggestions for Further Investigation,' the authors note that timing of extensive excavations done as part of an MTBE cleanup effort coincides exactly with the timing of the sudden spikes in nitrate levels in city wells. The focus of the cleanup project was the site of a gasoline station that had been located on the comer of Atascadero Road and Main Street. That site ... lies directly over the Morro Basin aquifer boundary and a very short distance from the Morro Basin city wells.

"The Sadowski-Bruton report asks, 'Could the extensive excavations and borings done here, on the boundary of the aquifer, and in very close proximity to the well field, have provided an underground path for contaminants in groundwater adjacent to the aquifer boundary (namely, exfiltrated sewage) to be pulled into the aquifer, and to the wells, when the wells are pumping? Yes, we believe so.' In fact, over sixty monitoring and extraction wells were drilled into the aquifer and its northern boundary."

If Sadowski and Bruton are correct, then it could be argued that the money spent on the desalination plant expansion, as well as the ongoing costs to treat the well water, were a misuse of taxpayer money that should have been spent to repair the defective sewer lines.

#

This article belongs to category: Local

EXHIBIT 3

CITY OF MORRO BAY

NOTICE OF EXEMPTION

JULIEL RODEWALD COUNTY CLERK BY MARY HARDER DEPUTY CLERK

JUL 1 0 2008

то: 🛛	San Luis Obispo Co. Clerk 1144 Monterey Street San Luis Obispo CA 93401	I	ROM:	City of Morro Bay Public Services Department 590 Morro Bay Blvd			
	Office of Planning & Research 1400 Tenth Street Sacramento, CA 95814			Mono Day, CA 93442			
Project Title:	Morro Bay Desal Plant Energy Record	very System					
Project Location - Specific: 176 Atascadero Road							
Project Location	n - City: Morro Bay	(County:	San Luis Obispo			
Description of Project: Desal energy recovery system and brackish water treatment train installtion at 176 Atascadero Rd. w conditions.							
Name of Public	Agency Approving the Project:	CITY OF MORR	O BAY				
Name of Persor	n or Agency Carrying Out Project:	Dylan Wade					
Exempt Status: (Check One) Reasons why project is exempt: Minor alterations which do not increase the capacity of the system and are necessary for phealth protection							
Minis	terial (Sec. 21080(b)(1); 15268);	\boxtimes	Categorio Type and	eal Exemption: Section Number: Class 1 Sec. 15301.b			
Decla	red Emergency (Sec. 21080(b)(3); 15269(a)						
Decla Decla	red Emergency (Sec. 21080(b)(3); 15269(a)		Statuary .	Exemption Code No.			
Lead Agency: CITY OF MORRO BAY							
Contact Person	: Mike Prater	Telep	hone: (80	5) 772-6261			
Has a Notice of Exemption been filed by the public agency approving the project? Xes No							
Certification: I hereby certify that the public agency has made the above finding and that the project is categorically exempt from CEQA.							
Signature MARPH Title: ENVIRONMENTAL COORDINATOR Date: 7-10-02							
S:\Capital Projects\Desal Energy\Master Notice of Exemption.doc Exhibit 6							

A-3-MRB-11-001 143 of 363 From the September issue of the SLO Coast Journal

EXHIBIT Y

Nitrates in Morro Bay Municipal Wells – New Facts Emerge

Synopsis: For several years, Morro Bay city staff and officials have claimed that the nitrates in the Morro Basin city wells come from fertilizer used by farmers in the Morro Valley. They allege that runoff from irrigation carries the nitrates into the Morro Basin aquifer, which is the source of the city well water.

Farmers and some Morro Bay residents disagree. Many believe that, despite claims made in a study commissioned and funded by the city, the nitrates come from sewage leaking from Morro Bay sewer lines. Two local activists reviewed the city's study and wrote a detailed response, pointing out what they believe are errors and omissions. Now, new evidence that may support the activists' and farmers' viewpoint has emerged.

While the tests run on city well water consistently show high nitrate levels, newly published test data for a nearby private well show very low nitrate levels. Yet, both well systems get their water from the same source – the Morro Basin aquifer. What could explain the difference?

Well test data recently published by the State Water Resources Control Board (SWRCB) raises new questions regarding the nitrates in the City of Morro Bay's Morro Basin well field. Very high nitrate levels have persisted in the city wells since 2002. However, test results for the water in a nearby private well on power plant property have consistently shown very low nitrate levels. That well is owned by Morro Bay Mutual Water, a PG&E affiliate.

The city wells are located in very close proximity to one another. One of those wells was chosen at random for study for this article. The SWRCB data includes well test results for both the city and the Morro Bay Mutual Water wells for the period beginning in 2002, and ending in 2009.

The nitrate levels found in the city well for that period ranged from 27 parts per million (ppm) to 100 ppm. Meanwhile, nitrate levels found in the Morro Bay Mutual Water well ranged from 1.4 ppm to 10 ppm.

The Source of the Well Water



The city's Morro Basin wells and the Morro Bay Mutual Water well draw their water from the same source, the Morro Basin Aquifer. The following diagram, is a portion of a larger diagram published in the <u>Morro Basin Nitrate Study</u>, which was commissioned and funded by the city. The diagram shows the location of the city wells and, in black, the boundaries of a portion of the aquifer. The portion of the aquifer not shown here extends eastward into the Morro Valley, following the paths of Morro and Little Morro Creeks.

Water in the area of the aquifer where the subject wells are located comes from several sources. According to the Morro Basin Nitrate Study, some of the aquifer's water flows in underground through the narrows - a portion of the aquifer that is about 800 feet wide, with saturated sediments about 30 feet deep. The narrows area is there in A-3-MRB-11-001 144 of 363

the center-right portion of the diagram. Some of the water comes from precipitation soaking into the ground and, when Morro Creek is running, some of its water also soaks into the ground and finds its way into the aquifer. The aquifer is also subject to seawater intrusion during droughts.

The city wells are located on the west side of the narrows as shown. They are north of Morro Creek, and adjacent to Highway 1. The Morro Bay Mutual Water wells are also located west of the narrows and near Highway 1, but are south of Morro Creek, on power plant property.

The Nitrate Level Test Data

The city is required to perform regular tests of its well water and to submit its test results to state authorities. Morro Bay Mutual Water's wells are regulated by the County. They do not serve the public, so testing and reporting requirements are less rigorous, and there are fewer test results for those wells than for the wells operated by the city. However, there is sufficient data to raise questions regarding what appears to be a significant difference in the nitrate levels in the two well systems.

Year	Well System	Sample Date	Nitrate level
2002	City of Morro Bay	10/21	47
	1 1 1	11/12	71
	Morro Bay Mutual Water	11/20	10
		12/26	8.7
2005	City of Morro Bay	9/20	27
	4	11/15	57
	Morro Bay Mutual Water	6/30	1.4
2006	City of Morro Bay	1/18	47
		6/6	46
		10/17	49
		11/20	84
		11/27	86
		11/28	84
		11/29	80
		11/30	80
		12/1	77
		12/4	81
		12/5	81
	Morro Bay Mutual Water	12/13	10
2007	City of Morro Bay	5/2	49
		5/7	55
		11/19	100
	Morro Bay Mutual Water	6/5	7.9

2009	City of Morro Bay	8/4	69
		9/15	73
		10/6	72

Morro Bay Mutual Water 7/14 3.3

Nitrate Level Problems Begin in 2002

Beginning in 2002, the level of nitrates in the city's Morro Basin wells began spiking every November. The Morro Basin Nitrate Study includes this statement, "Nitrate concentration peaks between 2002 and 2006 coincide with full scale production at the well field, which occurs annually around November during the State Water Project shutdown. Historically, nitrate concentrations in November were in decline, rather than peaking."

The chart on the right, which appears in the study, illustrates the situation. It covers the years 1954 through 2006, and clearly shows the nitrate level spikes that began in 2002.

In recent years, the city has been using its Morro Basin wells not just in November, but in other months of the year. Nitrate levels been



consistently high whenever the wells are used. This ongoing contamination of the Morro Basin wells has proved costly for city residents, as the nitrates must be removed the from the water by processing it at city's desalination plant.

Residents Question the Morro Basin Nitrate Study

The Morro Basin Nitrate Study was published in December, 2007. Some Morro Bay residents immediately disputed the study's conclusion that the nitrates in the city wells came primarily from fertilizer used in agricultural operations. In April, 2008, residents Richard Sadowski and Marla Jo Bruton published a rebuttal. Their report, "The 'Morro Basin Nitrate Study': Issues and Concerns," points out a number of alleged flaws in the 2007 study, and presents the theory that the true source of the nitrates in city wells is sewage leaking from the <u>city's dilapidated sewer system</u>.

The Sadowski-Bruton report includes these statements of opinion: "We believe that the findings presented in the 'Morro Bay Nitrate Study' are based, in large part, upon invalid assumptions, inadequate study of major potential nitrate contamination sources, and in some cases, faulty 'science.' We believe that the study totally fails to establish any reasonable proof that agricultural operations are the primary source, or even a significant source, of the nitrates in Morro Bay wells."

Sadowski and Bruton took issue with the fact that the study failed to include tests for sewage in ground water near the wells, and apparently failed to thoroughly investigate the potential for leaking sewage to find its way into the aquifer. They stated, "Content of the Cleath report section on hydrogeology was limited to active significant section of the cleath report section."

of the Morro basin covering topics such as subsurface inflow through the narrows, and stream flow seepage. We found no discussion of hydrogeology related to underground water transport outside of, and in the direction of the basin, from other parts of Morro Bay. The recharge dynamics section of the report also failed to consider the potential for exfiltrated sewage migration to the aquifer from other Morro Bay locations."

Nitrate isotope values are also an area of contention. Sadowski and Bruton's consulting chemist noted that the nitrate isotope values reported for the Morro Basin wells differed greatly from the standard values for commercial fertilizer, but were a close match to sewage isotope values cited in the study "Ground-water Quality Impacts from On-site Septic Sytems," by Dennis McQuillan. As reported by Sadowski and Bruton, in the McQuillan study, the nitrate isotope values found in sewage ranged from 7.2 to 12.1. The nitrate isotope values for the Morro Basin wells, as specified in the Morro Basin Nitrate Study, range from 7.9 to 10.0.

Standard values for commercial fertilizer differ slightly among different sources. For example, one source states that the standard nitrate isotope values for commercial fertilizer range from -4.0 to +4.0. Another, source says that the range is -3 to +2. However, both of these ranges are inconsistent with the nitrate isotope values of 7.9 to 10.0 reported for the Morro Basin wells.

Sadowski and Bruton cited a number of other issues including alleged problems with sample gathering and testing, "seemingly contradictory statements regarding nitrate concentrations," alleged "disconnects between data and conclusions drawn from it," and issues related to the study's discussion of fertilizer application.

Residents Present Their Own Theory



The Sadowski-Bruton report presents the authors' theory regarding the manner in which sewage could have found its way into city wells. In a report section titled, "Suggestions for Further Investigation," the authors note that timing of extensive excavations done as part of an MTBE cleanup effort coincides exactly with the timing of the sudden spikes in nitrate levels in city wells. The focus of the cleanup project was the site of a gasoline station that had been located on the corner of Atascadero Road and Main Street. That site, represented by the blue dot in this image, lies directly over the Morro Basin aquifer boundary and a very short distance from the Morro Basin city wells.

The Sadowski-Bruton report asks, "Could the extensive excavations and borings done here, on the boundary of the aquifer, and in very close proximity to the well field, have provided an underground path

for contaminants in groundwater adjacent to the aquifer boundary (namely, exfiltrated sewage) to be pulled into the aquifer, and to the wells, when the wells are pumping? Yes, we believe so." In fact, over sixty monitoring and extraction wells were drilled into the aquifer and its northern boundary.

Sadowski and Bruton went on to say, "On page 2 of the Cleath study, it is stated, 'Ground water movement below the narrows is controlled by the city well field. When the wells are in production, a pumping depression develops that draws water radially toward the wells, including sea water drought. During non-pumping periods, ground water flow below the narrows is toward the coast at a nominal hydraulic gradient of 0.005 ft/ft.'

"Because of the remediation work between 2000 and 2002, with emphasis on preventing the MTBE from reaching the wells, along with the fact that the city was prohibited from using the wells until remediation was complete, significant amounts of groundwater containing exfiltrated sewage probably would not, in our opinion, have been able to reach the wells until 2002.

Exhibit 6 A-3-MRB-11-001 147 of 363 "Then, in 2002, contaminated groundwater from outside the aquifer boundary would have been pulled directly into the wells as pumping started. In our opinion, the pumping, as it drew in the contaminated water, would create a 'plume' of sewage-contaminated water that would be drawn directly to the wells. There would be some mixing with water already in the aquifer, but not enough to dilute the contaminated water to the point that nitrate levels would be in the safe zone."

The authors further state, "In summary, we consider the timing of the excavations and the timing of the sudden increase in well contamination to be too much of a "coincidence" to ignore. We see no evidence that the consultants even considered this potential source of well contamination. As previously noted, we consider the possibility of a sudden, radical increase in fertilizer usage to be highly unlikely.

"We would like to see testing of the ground water adjacent to the aquifer, and of the water in the aquifer, in the immediate region of the wells, with comparison to water IN the wells just before, and during the first few days after pumping begins in November. We believe that such testing would lead to a different conclusion than the one drawn by the consultants"

What Could Explain the Difference in Nitrate Levels in City and Morro Bay Mutual Water Wells?

Morro Bay city wells and Morro Bay Mutual Water wells are located fairly close together. Yet, tests show that the Morro Basin wells are contaminated with nitrates while the Morro Bay Mutual Water wells are not.

It has been suggested that, if the Sadowski-Bruton theory is correct and sewage is the cause of the nitrate problem, one possible reason for the difference in nitrate levels is location. The city wells are very close to the dilapidated Main Street sewer trunk line, which is allegedly a primary source of sewage pollution in the aquifer. The Morro Bay Mutual Water wells are farther from the alleged sewage source.

The usage of the wells was also suggested as a possible factor. In addition to being farther from the alleged sewage pollution source, the Morro Bay Mutual Water wells are used very little in comparison to city wells. The theory is that the wells that pump the most water are most likely to pull the pollution their direction.

According to information received from the Morro Bay City Attorney, the Morro Bay Mutual Water wells only produce about 5,500 gallons of water per day, or 2,007,500 gallons per year. The city wells produce a great deal more. For example, in 2010, the city wells produced 312 acre feet of water. That equals 101,665,512 gallons.

The fact that the city wells are closer to Morro Creek than the Morro Bay Mutual Water wells was also considered by resident researchers. It has been suggested that, if the surface water in the creek had higher nitrate concentrations than the water in the underground flows that come through the narrows, then perhaps the city wells' closer proximity to the creek might explain the nitrate level discrepancy.

However, residents report that in summer, the creek in the area of the wells goes dry. Yet, the nitrate levels in the city wells remain high. Resident researchers believe that if high nitrate levels in Morro Creek were the cause of the high nitrate levels in the city wells, then the nitrates in the wells would go down when the creek is dry. They do not.

No other theories have been advanced to explain the nitrate level differences, but Sadowski and Bruton hold to a recommendation made in their 2008 report: Test the groundwater in the immediate vicinity of the wells for evidence of sewage contamination. Some residents are currently petitioning state agencies to order independent testing in an effort to resolve the issue.

> Exhibit 6 A-3-MRB-11-001 148 of 363

EXHBI 5

Written by Ed Ochs Tuesday, 10 May 2011 21:04

The Liquefaction of Los Osos

By ED OCHS

Liquefaction caused widespread damage in the recent New Zealand and Japan earthquakes, but despite compelling evidence of the serious hazards, it has been ignored by SLO County in planning the \$200 million Los Osos Wastewater Project in a high-risk liquefaction zone. Experts agree that the County needs to face the facts and take action now before it's too late.

The images on the evening news spilled out of our TVs for weeks, almost filling our living rooms with sand and water, yet the lessons of the New Zealand and Japan earthquakes appear to have been lost on San Luis Obispo County officials ramming through the huge Los Osos Wastewater Project, the biggest and most expensive in County history.

Despite the clear warnings, the County in its rush to push through the project has largely ignored the hazards of constructing a gravity collection system in the loose, sandy soils of Los Osos' County-documented liquefaction zone, which lies on known and recently discovered quake fault lines.

Consider this basic scenario: A future earthquake of unknown magnitude striking the region turns Los Osos' "Prohibition Zone," the area to be sewered with large-diameter gravity pipes, into the liquefaction zone that overlaps it, potentially devastating Los Osos like it did Christchurch, New Zealand, and wide areas of Japan following their quakes. Along with major structural damage to homes and utility connections, sewer lines would likely be broken, and the upheaval of the County's deep-buried, sloping gravity pipes and hundreds of manholes will be difficult, costly and time-consuming to repair or replace. Undetected 25 feet or more underground, the damage to the public water supply by injecting it with raw sewage and pathogens from broken gravity pipes could pose a serious health threat to the community and its drinkable water supply. There is no "soft fix" for multiple non-functioning gravity sewer lines, only red-tagged houses served by inoperable sewers and neighborhood-by-neighborhood evacuation.

The severe, widespread liquefaction caused by the recent massive earthquakes in New Zealand and Japan surprised even seasoned disaster researchers who surveyed the extensive damage first-hand.

Scott Ashford, a professor of geotechnical engineering at Oregon State University and part of the Geotechnical Extreme Events Reconnaissance (GEER) advance team performing reconnaissance in Japan (http://bit.ly/dK6mfa), reported that much of the damage from the earthquake was the result of liquefaction: "The shifts in soil destroyed water, sewer and gas pipelines, crippling the utilities and infrastructure these communities need to function. We saw some places that sank as much as four feet.

"Buildings that are built on soils vulnerable to liquefaction not only tend to sink or tilt during an earthquake, but slide downhill if there's any slope, like towards a nearby river," Ashford said. "This is called lateral spreading. ... (T)his sideways sliding of more than four feet in some cases (is) more than enough to tear apart buildings and buried pipelines."

Liquefaction is a critical issue in coastal, low-lying Los Osos with its high groundwater and sandy soils. It poses a significant threat of serious damage to homes, water, gas and sewer lines, yet the County has failed to conduct the geotechnical review required by the Environmental Impact Report (EIR). Post-quake analysis of liquefaction from the recent earthquakes raises serious questions about whether San Luis Obispo's County's existing project plan, building codes and performance standards, and critical choice of technology are adequate to account for the potential of this destructive phenomenon to impact the liquefaction zone of Los Osos.

Thomas L. Holzer, Ph.D., CEG, with the Earthquake Science Center, U.S. Geological Survey, in Menlo Park, California, documented liquefaction in nearby Oceano during the 2003 San Simeon magnitude (M)6.5 earthquake (http://pubs.usgs.gov /of/2004/1269/).

"In general in my experience," Holzer told The Rock, "gravity-based waste-water collection and treatment systems do not fare well if they are impacted directly by significant liquefaction. This was demonstrated recently in the 2011 M6.3 aftershock in Christchurch, NZ, in which the sewer lines were not only damaged but clogged with liquefied sand. (http://www.eeri.org /site/images/eeri_newsletter/2011_pdf/EERI_NewZealand_EQRpt_web.pdf).

"In the 1995 Kobe, Japan, M6.8 earthquake," said Holzer, "sewage treatment plants in Kobe were so disabled by liquefactionrelated settlements that untreated sewage was discharged into Osaka Bay until repairs could be made (http://fire.nist.gov

> Exhibit 6 A-3-MRB-11-001 149/qf/2631 7:46 AM

/bfrlpubs/build96/PDF/b96002.pdf). Note that both of these earthquakes had magnitudes much smaller than M7.5."

"Government agencies would be well advised to consider the strong extensional and shear forces that are exerted on belowground structures when soils liquefy," said **Dr. John Claque**, Shrum Professor of Science, Centre for Natural Hazard Research at Simon Fraser University, Burnaby, B.C. "A magnitude-7.5 earthquake within ca. 50 km of the site, assuming the soils have high liquefaction potential, would certainly induce liquefaction.

"The Christchurch experience is informative," said Clague. "The February earthquake had a magnitude of only 6.3. Although the centre of the city was only 7 km from the epicentre, the amount of liquefaction was stunning and the damage correspondingly high."

Said Clague, "The bottom line is that the design of the facility must be done with liquefaction in mind."

"(A) reasonable goal," according an Oregon State University statement from Ashford's GEER research group, "is to at least anticipate the damage – to know what will probably be destroyed, make contingency plans for what will be needed to implement repairs, and design ways to help protect and care for residents until services can be restored."

"One does not need to look at the Japan earthquake to make inferences to (the) issue (in Los Osos)," said Ellen Rathje, Ph.D., P.E., University of Texas at Austin, citing Los Osos' "high water table due to proximity to the water.

"Liquefaction will be a concern for all infrastructure in the area, including single family homes. The Christchurch earthquake is the closer analogy – alluvial plain, moderate earthquake, liquefaction everywhere. However, infrastructure can be constructed to withstand earthquakes and liquefaction – it just takes the right technology and money."

The Politics of Quake Safety

On April 14 State Sen. Sam Blakeslee called for "a suspension of the licensing effort under way at Diablo Canyon nuclear power plant until a myriad of questions regarding the seismic setting at the facility are answered." Yet Blakeslee has remained silent on asking for a suspension of engineering contracts on the nearby Los Osos Wastewater project, which he went so far as to write a state law to build, and which parallels Diablo Canyon's earthquake vulnerabilities.

So far, Blakeslee has not asked the County to suspend work on the LOWWP until an updated liquefaction analysis – including new information from New Zealand and Japan -- can answer a similar "myriad of questions regarding the seismic setting" for the gravity collection system in a high liquefaction zone.

Blakeslee's approach to local earthquake hazards has been inconsistent. A geophysicist with a doctorate in earthquake studies from UC Santa Barbara, he seeks a seismic risk assessment for Diablo Canyon prior to relicensing but not a parallel liquefaction study for Los Osos prior to engineering the sewer project, or a thorough evaluation of the gravity system with respect to local hazards such as earthquakes, liquefaction and flooding. Such an evaluation is necessary to preserve the intent of the California Coastal Act – and protect Los Osos "Prohibition Zone" homeowners' Prop 218 sewer assessment of \$25,000 per home.

While Diablo Canyon is a "hot" national political springboard, and Blakeslee didn't build the reactors, his "Blakeslee Bill" seized control of the sewer from the Los Osos Community Service District and gave it to the County to build a gravity system, which will own and operate it, and this may have something to do with why Blakeslee hasn't addressed liquefaction in Los Osos.

The County did not include any liquefaction update in its RFP to CDM, and CDM did not include liquefaction in its proposal to the County. In fact, the technical portion of CDM's Feb. 24, 2011 proposal did not include the word "liquefaction," although it may not have been included because the proposal was prepared prior to the March 11 Japan event. Nevertheless, the EIR classified the Los Osos area with high liquefaction potential, and CDM should have addressed it somewhere in their technical proposal, but did not. The Rock contacted CDM but they declined to explain.

The County's Expanded Geology Analysis in the EIR cites: "Within the Los Osos area... geologic units such as beach sand, dune sand, and younger alluvial deposits as having a high potential to contain sediments that may be prone to liquefaction.

"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

Exhibit 6 A-3-MRB-11-001 150/dfl38881 7:46 AM along the proposed collection/conveyance system, including within Los Osos Creek and Warden Creek."

As a "mitigation measure" the EIR calls for a geotechnical report: "Prior to approval of the improvement plans for the proposed facilities that are part of the collection system and at the treatment plant site, a geotechnical report that addresses liquefaction hazards shall be prepared and approved by the County of San Luis Obispo. The geotechnical report shall state the recommended actions for the collection system and treatment plant site so that potential impacts from seismically-induced liquefaction would be reduced to less than significant."

The EIR requires the liquefaction study, yet EIR consultant **Michael Brandman Associates** and County Public Works have brushed off the liquefaction issue and the importance of the analysis to be done before CDM begins redesigning elements of the collection system, not after.

The last geotechnical report for the LOWWP was prepared in March 2004 by Fugro West in San Luis Obispo for Montgomery Watson Harza's halted midtown project. That report identified high liquefaction areas but did not flag liquefaction on Broderson and on the collection system in their report, and did not address the pipelines themselves or any of the approximately 800-plus manholes. Based on current experience in New Zealand and Japan, this is a major omission in their prior work. Contacted by The Rock, Fugro declined to explain the potential impact of liquefaction on about 200 home downgrade from the Broderson leach fields, below what will be fully saturated, shallow, sandy soils receiving 800,000 gallons per day on seven acres with a 10% slope.

In June 2010, Michael Saunders of Orenco Systems Inc., the largest manufacturer of STEP systems in the world, complained to the California Coastal Commission that "incorrect data and conclusions presented in County documents have, in our opinion, often been misleading or incorrect," clearing the way for the County's pre-selected gravity collection system -- without comparing the hazard risks and repair/replacement costs to any other system -- and for the Coastal Commission to permit it.

"According to (August 2005) Los Osos Community Services District Hazard Mitigation Plan, the probability of a severe earthquake in Los Osos is medium to high in terms of severity and a high probability of occurring. Despite this the fine screening mentions the word earthquake once and never mentions it with respect to the comparison of wastewater collection alternatives. The EIR talks about earthquakes but only with respect to the County's preferred project. The NEPA document never mentions earthquakes. Liquefaction isn't mentioned in any of the documents."

The County's historical bias toward gravity collection technology has been and continues to be a nagging problem for informed geologists and engineers, as well as for the portion of the community selected to pay the inflated bills. The County's Rough and Fine Screening analysis completely ignored risks associated with naturally-occurring hazards such as earthquakes, floods, storm events and liquefaction. The EIR does not compare the impacts of liquefaction on a gravity sewer system versus any other available system, only on the County's project. And the evaluation of each technology should have included local environmental hazards, but it didn't happen. Instead, the County declared gravity the environmentally-preferred project without an updated geotechnical report to determine what magnitude of earthquake and ground-shaking should be used as basis-of-design.

Construction methods and techniques may reduce or prevent damage, experts report. Jeanne Perkins, former Earthquake Program Manager for the Association of Bay Area Governments (ABAG) and now a consultant to ABAG, said: "In general, waste water collection systems can be designed to be safe. The most vulnerable portions of the system tend to be the 'connections' in the system where pipes go into and out of, for example, pumping stations, so those connections need special design. Another vulnerable area is the 'edge' of liquefaction areas because differential settlement and movement of the sewer lines can break them. However, specific engineered fill in the trenches of the lines and special pipe designs can work. "

The County may simply believe that a M7.5 earthquake would break any sewer line, gravity or STEP collection, but this was not the case in New Zealand where HDPE and MDPE pipes used in STEP collection held up to the extreme rigors of multiple M7.1 2 (2010) and M6.3 (2011) quakes. Comparing system repair and replacement costs, generally, repair costs for the STEP collection system run a fraction of the cost to repair gravity sewer line, a maximum of 15% if it needs 100% replacement relative to a gravity sewer, STEP experts told The Rock. The County rejected STEP collection in April 2007 without comparing STEP costs and risks to gravity, as initially promised by the County for the Proposition 218 vote. That vote passed, in part, because alternative technologies were to be compared to gravity in a co-equal analysis, but they weren't.

Geologist Alfred Hochstaedter, a professor at Monterey Peninsula College in Monterey, California, agrees that Los Osos could be very prone to liquefaction during a large earthquake. "It looks like Los Osos would indeed be prone to liquefaction hazard.

"Then the geologic question reverts back to the likelihood of a large earthquake in the vicinity of Los Osos to trigger the

Exhibit 6 A-3-MRB-11-001 15%/bf/369/ 7:46 AM liquefaction. Is there a chance of this happening? Yes. Is there a *high* probability of this happening in the next 30 years? Probably not. But nor was there a high probability of the Japanese tsunami happening either. Did geologists know that things like this occurred in Japan in the past? Absolutely. Did geologists think that this kind of thing could happen in Japan in the future? Absolutely. Is there a *high* probability of something this catastrophic happening in any one place on any human time scale? No.

"The timing of large, catastrophic events is very difficult to predict," said Hochstaedter. "The places where they will occur is easier to predict. The probability of them happening in a particular place in any human time scale (tens of years) is low. So how do municipalities allocate funds to ensure that infrastructure will withstand very low probability events? That's a very difficult question."

The GEER-OSU release states that "some degree of soil liquefaction is common in almost any major earthquake. It's a phenomenon in which saturated soils, particularly recent sediments, sand, gravel or fill, can lose much of their strength and flow during an earthquake. This can allow structures to shift or sink and significantly magnify the structural damage produced by the shaking itself."

GEER research also points out that most earthquakes are much shorter in duration than the recent Japan quake, which may have lasted as long as five minutes. "The length of the Japanese earthquake, as much as five minutes, may force researchers to reconsider the extent of liquefaction damage possible in situations such as this," said the report.

"With such a long-lasting earthquake, we saw how structures that might have been okay after 30 seconds just continued to sink and tilt as the shaking continued for several more minutes," GEER's Ashford said. "And it was clear that younger sentiments, and especially areas built on recently filled ground, are much more vulnerable."

Fugro's 2004 geotechnical report partially addressed a sustained seismic event. "The manifestation and damage that can be associated with liquefaction is strongly dependent on the duration of the ground motion. Larger magnitude earthquakes typically result in longer periods of shaking. Earthquakes that occur closer to a site generally result in higher ground motions than a similar magnitude earthquake that could occur away from the site."

The Fugro report continues: "Liquefaction can result in ground mobility that impacts pipeline grades, or results in pipelines floating out of the ground in areas of liquefaction. The soils encountered within the pipeline network vary from soils having a relatively high potential for liquefaction, to soils having a relatively low potential for liquefaction. The potentially liquefiable soils were typically encountered in areas that are either low in elevation or relative topographic relief, such as the shoreline areas along Morro Bay and interdunal depressions along Morro Avenue, Paso Robles Avenue, Santa Ynez Avenue, and Ramona Avenue-Mitchell Drive. These areas are typically characterized as being underlain by relatively loose sand and shallow groundwater."

Wrote Sam Blakeslee on March 19: "The public counts on lawmakers and regulators to put the public's safety ahead of the agendas of powerful interests. Our greatest risk is arrogantly asserting that California is immune to this type of disaster before obtaining the necessary scientific data to adequately understand the risks posed by the complex fault systems off our coast."

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UPDATE: On May 17 Dana Ripley of Ripley Pacific, a former consultant to the LOCSD and a consulting engineer to STEP builder WM Lyle, gave a brief summary of his presentation to the SLO County Board of Supervisors on liquefaction in Los Osos. "Liquefaction is a known quantity in Los Osos," he said. "(The County's 2007) liquefaction hazards map from the LOWWP EIR shows indeed that most of the collection area is designated as having a very high risk of liquefaction. The EIR was very clear that the project had a high risk of liquefaction. The awareness of earthquakes and tsunamis are very high in this county due to (nearby) Diablo Canyon (nuclear facility). That level of awareness should extend to this particular (wastewater) project as well. The position of this board should be the same as Diablo Canyon: Study the seismic risks before you do the detailed design. The gravity PVC collection pipe system needs a current budget as proposed by CDM. I would also recommend that CDM produce a budget for producing a collection system that could withstand a magnitude 8.0 earthquake-related liquefaction. Finally, I know we've been excluded from the table, but put the HDPE high-density polyethylene collection system back on the table for cost-comparison purposes."

Additional links:

NPR Liquefaction Report Sewers Float and Sewer Performance in Earthquakes Water Pipes vs. Wastewater Pipes Christchurch NZ Liquefaction Poster 2010

Two additional working definitions of liquefaction:

Exhibit 6 A-3-MRB-11-001 15**2/ðf/303**1 7:46 AM Liquefaction, which is also commonly observed during earthquakes, is a phenomenon where saturated sands lose their strength during an earthquake and become fluid-like and mobile. As a result, the ground may undergo large permanent displacements that can damage underground utilities and well-built surface structures. The type of displacement of major concern associated with liquefaction is lateral spreading because it involves displacement of large blocks of ground down gentle slopes or towards stream channels. (Source: "Liquefaction-Induced Lateral Spreading in Oceano, California, during the 2003 San Simeon Earthquake," by Thomas L. Holzer and others, prepared by the USGS in cooperation with the San Luis Obispo County Planning and Building Department, 2004)

Liquefaction is a loss of soil strength due to a rapid increase in soil pore water pressures due to cyclic loading during a seismic event. In order for liquefaction to occur. three general geotechnical characteristics are typically present: 1) groundwater is present within the liquefiable zone; 2) the soil is granular; and 3) the soil is in a low to medium state of relative density. If those criteria are met and those soils are subjected to strong ground motions, then those soils may liquefy, depending upon the intensity and cyclic nature of the strong ground motion. Seismically induced settlement or collapse can occur in soils that are loose, soft, or that are moderately dense and weakly cemented, or in association with liquefaction. Manifestations of liquefaction can consist of sand boils, loss of bearing capacity. Manifestations of liquefaction can consist of sand boils, loss of bearing capacity, lateral spreads and slope instability, and differential and areal settlement. The severity of the consequences of liquefaction is dependent on relative density of the soil and intensity and duration of the ground motions; however, not all soils that liquefy experience the same degree mobility or ground failure. (*Source: Fugro 2004 Geotechnical Report for MWH*)

This article belongs to category: Local

Madeline Cavalieri

From:Jack McCurdy [jack.mcc@att.net]Sent:Friday, October 07, 2011 12:47 PMTo:Madeline CavalieriSubject:My comments on Alternative Sites EvaluationHi Madeline,

Just in case these don't get to the Coastal Commission staff for some reason, below are my comments on the Rough Screening Alternative Sites Evaluation prepared by Dudek for the Morro Bay City Council and Cayucos Sanitary District board. An article I wrote about the Evaluation is at <u>http://www.slocoastjournal.com/docs/news/wwtp_floodzone.html</u>. I think my comments reflect the sentiments of those who have been following the WWTP developments. Some of them were unable to submit their comments by the Sept. 30 deadline imposed by the MB/CSD and may be sending them to your staff in order that you can obtain a more accurate show of opinion within the communities about the project.

Thank you, Jack

Overall, the Evaluation only focuses on the gross costs involved in building a new WWTP on any of the other 16 sites. But it fails to take into account the potential financial gains from removing the plant from the Estero Bay waterfront to allow expanded visitor-serving uses that would likely generate income to offset (a) the presumably higher cost to build a plant that could produce significant quantities of disinfected recycled water and (b) the costs of pipes and pumping to bring recycled water from one of the other sites to Morro Bay residents, who, the Coastal Commission has emphasized, badly need less expensive and more reliable sources of water, which could save them significant amounts of money. The costs of building such a plant also could be offset by selling such recycled water for agricultural irrigation, especially if a new plant were located closer to farms inland.

Therefore, the report provides no such economic analysis that gets at the net cost of a new plant at some other site, leaving it narrow and seemingly biased.

A second major shortcoming of the report is that it rejects requiring a new plant to produce a large volume of recycled water to fill Morro Bay community needs and ignores the Coastal Commission staff's letter of Nov. 12, 2010, which emphasized that the city's LCP states "use of reclaimed water is the City's second highest priority (after conservation)" and that "details about the potential to reclaim 100% of the wastewater produced" by a new plant must be provided by MB/CSD.

Specific points:

—The Evaluation states that the 17 sites "with only a portion or portions of developable land area within the 100-year flood hazard zone . . . were not considered to exhibit a fatal flaw due to this criterion alone because additional, site specific study could possibly demonstrate there are feasible, developable areas outside of the 100-year floodplain." It cites no basis for allowing differentiation between a site being partly or wholly within the hazard zone in light of the apparent fact that such maps may not be as precise as assumed and the changing nature of water front areas is ongoing and continually alters the mapping of such areas.

Exhibit 6 A-3-MRB-11-001 154 of 363

—A portion of what the Evaluation calls the WWTP site is shown to be outside the 100-year Flood Hazard Zone along the western and eastern site boundaries, the Evaluation says. Therefore, "portions of the site appear to have the potential for development outside of the Flood Hazard Zone." This statement ignores the California Coastal Commission staff report of December, 2010, which made clear that use of any part of that shoreline area for such a facility would conflict with Local Coastal Plan and Coastal Act protections of such areas for visitor-serving and visual benefits.

—The Dudek report recognizes that the "City's LCP prohibits new development in flood plains except under very limited circumstances as specifically articulated in the LCP. All development, including construction, excavation and grading, except for flood control projects and agricultural uses shall be prohibited in the 100-year floodplain areas unless off-setting improvements in accordance with the HUD (U.S. Department of Housing and Urban Development) regulations are required " But he Coastal Commission staff report cited above has stated in commenting on the site in the floodplain submitted by MB/CSD last January: " ... (LCP) Policy 9.03 ... prohibits all development in the 100year floodplain, including construction, excavation and grading, except off-setting improvements required by HUD. This project is not an off-setting improvement required by HUD, and therefore, the LCP prohibits the project at this location." Policy 9.03 is mentioned in the Evaluation, but it is interpreted as meaning only that "any alternative site located <u>entirely</u> (emphasis added) within the 100 year floodplain is considered to demonstrate a fatal flaw."

—The Evaluation also contends that the LCP protects the WWTP at its present location, which provides it with unwarranted special consideration. But that issue was addressed by the Coastal Commission on March 11 when it responded to the contention that the LCP "allows for protection of the existing WWTP at its current location because the ocean outfall line is coastal-dependent. However, this policy does not apply to the approved project because this project is for construction of a new WWTP. The policy in question is meant to indicate that the existing plant could be protected . . . to address flooding . . . if that were deemed appropriate for other reasons, but it is not a basis to justify a replacement plant incorporating different technologies at the same location."

— As a means of preventing a plant in the flood plain area from being flooded, the Evaluation says "the site elevation is proposed to be raised above the 100 year floodplain, or approximately 5 feet above the existing site grade, to accommodate the new treatment facilities." But the Coastal Commission earlier had quashed that idea contained in the MB/CSD plant project it turned down: "... in an effort to address the risks of flooding, the ... project includes raising the new WWTP on approximately five feet of new fill. Such an approach does not conform to (LCP) Policy 9.05, which requires cut and fill to be minimized, and requires projects that include excessive cut and fill to be modified or denied."

—In interpreting how much of the plant site is within the floodplain, the Evaluation refers to an older map issued by the Federal Emergency Management Agency (FEMA). But a new FEMA map just released (<u>http://www.morro-bay.ca.us/documents/Public%20Services/Engineering/Draft%20LOMR%</u> 208_9_11.PDF), which does not seem to be acknowledged and could affect the Evaluation's contention that area at the the WWTP site is not in the flood zone and could be eligible for use as a site for a new plant.

—The Evaluation says "the risk that a potential alternative site could be inundated by a tsunami during the life of the facility is very low due to the long intervals between earthquakes of sufficient location, magnitude and character of movement to actually cause a tsunami." No scientific or expert reference for that contention was provided. Therefore, it is speculation.

—The Coastal Commission staff report found that the previous MB/CSD project "is located in a 100year floodplain and tsunami inundation zone directly adjacent to an eroding shoreline where the sea

level is rising and in an area subject to known seismic hazards."

—Six of the 17 sites surveyed and evaluated by the Evaluation were identified in its report as having "fatal flaws" (the report states that a fatal flaw is "defined as an underlying site condition or restrictions, such as policy or regulatory prohibitions for new development, presence of unmitigatable environmentally sensitive resources, or other such circumstance that would reasonably inhibit the City and/or MBCSD's ability to develop a site . . . with a WWTP"). Therefore, those six sites were eliminated by Dudek from further consideration in its upcoming "fine screening process." The Evaluation eliminated a site from further consideration if it was deemed to have three "fatal flaws." Elsewhere, the report seems to indicate that just one fatal flaw is enough to disqualify a site from further consideration: . . . "any site that has a demonstrated fatal flaw will not be carried forward for further evaluation in the rough screening analysis."

—Some of those same flaws that caused any one of the six sites to be eliminated were found in other sites that will continue to be reviewed, including the "current WWTP." And the report itself states that flaws can in some cases be corrected through such processes as amending the city's Local Coastal Plan. The number (three) and types of flaws used as the standard for deciding which sites would be eliminated appears to be subjective, arbitrary and applied inconsistently.

—The WWTP site was "not considered to exhibit a fatal flaw due to this criterion alone on grounds additional, site specific study could possibly demonstrate there are feasible, developable areas outside of the 100-year floodplain," the Evaluation said. The six eliminated sites apparently were not allowed to be studied in this manner.

—The Evaluation states that MB/CSD are committed to building a plant that would provide the quality of processed water for use in agriculture and to refurbish the city's municipal wells (called disinfected tertiary water). But it would be a limited amount to start off, although the report said the plant could be improved to produce more later, which would be an added cost, possibly a significant one. A Coastal Commission staff report said that if the wells could be regenerated to produce significant amounts of water for use by residents, it would open the way to reducing reliance on costly and unreliable state water supplies, which was not acknowledged in the Evaluation.

—Despite that stated commitment to build a plant capable of producing disinfected tertiary water, the report then dismisses water recycling, based on a 12-year-old report: "Both the City of Morro Bay and Cayucos were previously evaluated for potential users of recycled water by Carollo Engineers in1999 as part of the Comprehensive Recycled Water Study. That study concluded that implementation of a full-scale reclaimed water program was economically infeasible, largely due to significant costs required to upgrade the existing facility and installation of conveyance pipelines to deliver the recycled water to customers, many of whom had access to relatively inexpensive local groundwater supplies or imported state water project water.," which is contradictory. That was when groundwater supplies in Morro Bay were more available and state water was cheaper and its reliability was assumed, which does not make it a fair comparison to today's circumstances.

—The Dudek report also concluded that "A Groundwater Recharge Reuse Project (GRRRP)" at any of the potential sites being considered by MB/CSD is "most likely infeasible based on the characteristics of the existing aquifers and the proposed regulations governing GRRRP." The basis for that conclusion was not explained.

—The report makes no mention of the Coastal Commission's emphasis on the need for and benefit of a new plant being able to produce significant quantities of recycled water, which it did in rejecting the MB/CSD's proposed site in the flood plain on March 11: "The Applicant must also provide a

Exhibit 6 A-3-MRB-11-001 156 of 363

complementary, updated water reclamation feasibility study that explores all potential demand for reclaimed water, including for agricultural irrigation inside and outside of the City limits, and the way in which the project could be reconceived to dispose of treated effluent in this manner. The study must evaluate the feasibility of constructing infrastructure to accommodate such a water reclamation program, and it must evaluate the benefits of a water reclamation program, including potential benefits to stream habitats and water supply, potential revenue generation from providing such water to users and offsetting the need for purchased State Water credits, and the potential for elimination of the existing ocean outfall."

—In reviewing and rejecting the previous MB/CSD plant project, which was sited in the same coastal location as the one ranked first by the Evaluation, the Coastal Commission said that "although the LCP and the Coastal Act require public recreational access opportunities to be maximized and oceanfront land to be protected for recreational use, the (MB/CSD) project would reduce the availability of scarce oceanfront land for potential public recreational purposes, and it could cause adverse impacts to nearby existing public recreational access opportunities due to both construction activities and operation of the new WWTP," which is "inconsistent with LCP and Coastal Act public recreational access requirements."

—The Evaluation said a potential plant site located directly adjacent to oceanfront lands is "considered potentially inconsistent" with the LCP and the same with regarding public access/recreation, and "visual resources" that include "significant public views" along the shoreline. In both cases, the Evaluation's remedy was "additional effort to demonstrate consistency." No ways to accomplish that consistency were suggested.

—The Coastal Commission said "the City's analysis (Local Coastal Plan) of the impacts of approximately 4.5 feet of sea level rise indicates that by 2100, storm surges associated with sea level rise alone could inundate the project site. Taken together with other related constraints (floodplain location issues, shoreline erosion issues, creek mouth geometry and volume, etc.), it can reasonably be presumed that such sea level rise will tend to result in even worse flooding and inundation at this site over time, and that the site will be subject to shoreline erosion and its attendant impacts in the future." Without acknowledging the Commission's comments, the Evaluation said a site "located on, or adjacent to the shoreline would likely be subject to additional development constraints/limitations in the form of minimum setback requirements, prohibition of proposed and future shoreline protection, and would likely require additional site-specific study and design consideration and mitigation to ensure site development can accommodate potential sea level rise and associated hazards related to increased storm surge, wave uprush, flooding and tsunami." That makes such a site "potentially inconsistent with this criterion and associated LCP policies requiring additional effort to demonstrate consistency." But the preferred site was not given a fatal flaw as a result.

—Costs of not only building but operating a WWTP were emphasized by the Evaluation. "Wastewater conveyance operations, especially pumping costs, do vary between potential sites and is considered a significant factor in evaluating alternative sites. Pumping costs for each alternative site were compared relative to each other based on average daily flow and the pressure required to pump wastewater from the terminus of the existing collection system to the potential alternative site." The cost of constructing a WWTP at the California Men's Colony, Chorro Valley and Power Plant Hillside Tank Farm sites "would be prohibitive due to the amount of piping required to convey flows" plus "greater capital and operating costs" and "energy requirements due to pumping needs," the report said. No comparative costs figures seemed to be in the report to support that finding.

--Costs could also could be involved if regulations, such as the LCP, were to be amended due to the additional effort and delay in project implementation, the Evaluation said, and "Potential alternative

Exhibit 6 A-3-MRB-11-001 157 of 363 sites which would require a significant amount of additional planning, environmental analysis, development review and project design would result in delaying required upgrades to the existing wastewater treatment system necessary to ensure compliance with current NPDES (National Pollutant Discharge Elimination System) permit requirements in a reasonable timeframe and/or would require permit modifications or the issuance of a new NPDES permit and are therefore considered inconsistent with this criterion. With the exception of the existing WWTP site (Site 1), and to a lesser extent the Chorro Valley site (Site 2), constructing andmoperating a new WWTP at any other of the alternative sites proposed in this Rough Screening evaluation would require additional studies and CEQA (California Environmental Quality Act) analysis and processing prior to approval" The CEQA process for the alternative sites could reasonably take 12 to 18 months to complete once a conceptual design is completed, it added.

—Clearly, the Evaluation has placed cost ahead of other benefits, such as locating a plant where it would ensure against any possibility that flooding could not disable the plant and deprive the two communities of sewer services for an unknown length of time. In assessing costs of placing a new plant at various sites, the Evaluation does not raise the issue of the economic benefits that would be derived from removing the plant from the present site. One economic benefit would come from opening up that scenic, bay front area to extensive visitor-serving uses. Another would come from making available disinfected tertiary to reduce reliance on state water, saving residents possibly significant amounts of money on their water rates. A third would come from selling that quality of water for agricultural irrigation, thereby also protecting such lands for long-term use and productivity. All this income would serve to offset—perhaps significantly—the costs of locating the plant elsewhere. Therefore, no complete economic analysis has been conducted to determine the net cost—not just the expenditures to build and operate a plant at an alternative site—by taking into account these other incomes to the MB/CSD from new uses made available from locating the plant away from the present site.

—The Evaluation said "sites containing designated prime farmland and/or active agricultural uses in their entirety were considered to exhibit a fatal flaw because: 1) development on such sites would result in unavoidable impacts to agricultural resources protected under City and County LCP policies, and 2) unavoidable impacts to agricultural resources would conflict with CCA (California Coastal Act) policies which mandate protection of agricultural resources as a priority coastal use . . . " It also said that "alternative sites that would result in agricultural land conversion of prime soils and/or active coastal farmlands for development of a WWTP is considered to demonstrate a fatal flaw and will not be carried forward for further evaluation." Three potential alternative sites were dismissed as exhibiting fatal flaws related to agricultural resources.

—The Evaluation cited Coastal Act, Section 30241, as saying that "the maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy." The Coastal Act, the report said, would permit "the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250," which states: "Where feasible, new hazardous industrial development shall be located away from existing developed areas." It also cited LCP Policy 6.04: "All non-agricultural development permitted on non-prime agricultural lands shall preserve the maximum amount of lands in agricultural use. In approving any land divisions or non-agricultural use, all of the following findings shall be made by the City: (2) The proposed division and/or use will allow for and support the continued use of the site as a productive agricultural unit, would contribute to long term agricultural viability and would preserve all agricultural lands."

—However, these Coastal Act and LCP policies could be interpreted differently, which would seem to indicate that if a WWTP were placed on a small (five acres) part of a large parcel of prime agricultural land, the facility could serve to enhance the use of those lands through the provision of additional

Exhibit 6 A-3-MRB-11-001 158 of 363

recycled water for irrigation that would provide an economic benefit, not a deficit, to the productivity and value of local farming land that continually faces water shortages. It would seem to "allow and support the continued use of the (land) as a productive agricultural unit," as the LCP describes it. That possible interpretation of the statutes is not mentioned in the Evaluation.

-Each alternative is assessed and ranked based on considerations determined in coordination with public and stakeholder input received during public workshops and the related public comment period from June 14 to July 15, 2011, as well as from MBCSD and CCC staff, the Evaluation said. However, ranking the "current WWTP" first among the 17 alternatives would have been opposed overwhelmingly based on public comments submitted during that period.

—The Morro Bay Power Plant site was designated by the Dudek report as having potential for development of a new WWTP. The northern portion of the power plant site, however, is located within the 100 year Flood Hazard Zone, the report said, including the entire tank farm location, now being cleared, and contains mapped ESHA (Environmentally Sensitive Habitat Area) along Morro Creek at the northern perimeter of the power plant property. "Part of the site is reportedly sufficiently-elevated above grade due to the existing infrastructure requirements associated with the plant, and contains existing development (the plant itself with generators and three smokestacks)," the report said. Consideration of the power plant site for a new WWTP assumes there is usable space besides that taken by the power plant building, which was not made clear in the report. There are no known current plans to remove the plant.

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RECEIVED

Madeline Cavalieri California Coastal Commission 725 Front Street, Suite 300 Santa Cruz, CA 95060 OCT 2 5 2011

October 20, 2011

California Coastal Commission, Central Coast Area

Dear Ms. Cavalieri,

Attached, you will find a letter to the Coastal Commissioners. The letter and the article attached to it discuss the FEMA flood map changes made for the site that the Morro Bay City Council and the Cayucos Sanitary District (CSD) prefer for the new WWTP.

The comments in the letter are, I believe self-explanatory. However, I would like to emphasize the fact that it appears that no flood map for this area can possibly be accurate for more than a few years. With such major changes occurring in just an 8-year timespan, mainly due to sand dune configuration changes, I fail to see how any flood mitigation measures for the area can be reliable in the long run.

Also, I have some concerns regarding the fact that Wallace Group, which has been working steadily for the City and the CSD, and whose employees well know what site the Council and CSD prefer, seems to have been the sole source of the flood map configuration data submitted to FEMA.

On a related subject, the so-called workshop that was held recently by Dudek consultants was evidently not a workshop at all. According to people that I know who attended (I was not able to go), the audience was specifically told they could not make any comments on the rough screening process, despite the fact that there are many concerns with glaring and serious issues on how the process was conducted and with the results.

I was told that essentially, the attendees were told that the CCC is happy with what is being done, so the City, the CSD and Dudek do not want any public input. In fact, when a member of the audience tried to speak during a so-called question and answer period, the person was told that the public could not speak into the microphone when asking questions, and that answers would not be given in that format either. In addition, I was told that the public was only allowed to talk about the fine screening process, but that they had not been given any information on it, making it pretty much impossible to comment.

It appears to many who attended that this was just another "dog and pony show" and that a strong effort was made to prevent public concerns from being voiced and recorded in the public record. Some people put this in writing and submitted their comments. It will be interesting to see if what was submitted on paper makes it into the record.

Thank you for your time and your attention to this matter.

Sincerely,

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 160 of 363

October 17, 2011

Dear California Coastal Commissioners,

I am writing in regard to the Morro Bay – Cayucos wastewater treatment plant (WWTP) site favored by the Morro Bay City Council and the Cayucos Sanitary District (CSD) Board. As you know, your staff found numerous serious problems with that site, which lies adjacent to the current WWTP. One of those problems is the fact that the site lies in a flood plain.

A recent revision to the FEMA flood maps for the area has raised new questions, as noted in the attached article, "FEMA Map Revision Raises Concerns in Morro Bay". One of the key questions is the long-term viability of any flood plain map of the area. As the article states,

"The long-term reliability of the results of the map revision study may be questionable, and its value may be limited even if the favored site is chosen as the location for the new WWTP. There is evidence to suggest that flood patterns in the area are significantly affected by ongoing and fairly rapid changes in the configuration of sand dunes, and ongoing buildup of sediment in a nearby section of Morro Creek. Flood inundation patterns are reported to have changed substantially within a recent eight-year period. The useful life of the new WWTP has been estimated to be thirty years."

The new map, which becomes effective in December, differs substantially from the one it replaces. The new map was requested by the City of Morro Bay and is based upon data provided to FEMA by Wallace Group, a consulting firm that has done considerable work on the WWTP project thus far, and is currently employed to co-manage the project. The map revision project appears to have been undertaken for the purpose of showing reduced flood levels in the area of the WWTP site favored by the City and the CSD Board.

To the left, below, is a clip from the old flood map and, to the right, a clip from the new one. These clips show the current WWTP and the immediate surrounding area. Note that although the new map shows more inundation of the current site, it shows the area to the south to be free of flooding.



This change has, according to Wallace Group reports, occurred over a period of eight years, primarily due to shifting of sand dunes, and is discussed in detail in the attached story:

"Much of the topographical information on which the new map is based came from a 2001 floodplain study done for the Morro Bay Power plant. The Power Plant study was done by West Consultants. Using FLO-2D software, West developed a two-dimensional flood model for an area that includes both the Power Plant and the favored WWTP site.

Wallace Group consultants reported in 2009 that they had modified the work done by West, "to include topographical changes over the past eight years." Wallace Group "obtained and revised the original FLO-2D files with current dune topography and analyzed the flood hazard under existing conditions."

Among the topographical changes cited by Wallace are significant changes in sand dune configurations: "**The main** modification to the base model was to incorporate current dune topography based on survey information gathered in February, 2009. As suspected, the dunes have changed since 2001, gaining an additional 2 feet in height at a critical outlet location at the end of Atascadero Road."

Exhibit 6 A-3-MRB-11-001 161 of 363

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Also cited was a localized problem with creek sedimentation: "The capacity of Morro Creek in the vicinity of Main Street/Hwy 1 is limited due to channel geometry, restrictions at bridge openings and a build-up of sediment in the main channel. A depth gage at the Hwy 1 bridge indicates that sediment depth is 6 feet at that location." (emphasis added)

Given that there can be such significant and rapid changes in flood plain configuration resulting primarily from the constant, natural, and inevitable shifting of the dunes, it appears that no flood map of the area can be considered reliable for any significant period of time. Therefore, it appears to some of us that it is virtually impossible to design reliable flood mitigation measures for any structure to be placed on the WWTP site favored by the City and the CSD Board. This issue alone seems to be an excellent reason to disallow this site for the building of the new WWTP.

Thank you for considering the concerns of Morro Bay residents.

Sincerely,

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∠inda Stedjee 2848 Birch Avenue Morro Bay, CA 93442 Istedjee@charter.net

cc: Madeline Cavalieri

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California Coastal Commission, Central Coast Area

> Exhibit 6 A-3-MRB-11-001 162 of 363

Published September, 2011 in Rock of the Coast: http://www.rockofthecoast.com/news/local/892-fema-map-revision-raises-concerns-in-morro-bay

FEMA Map Revision Raises Concerns in Morro Bay

A Federal Emergency Management Agency (FEMA) flood insurance map project has raised concerns among some Morro Bay residents. The project focused on one proposed site for the new Morro Bay-Cayucos wastewater treatment plant (WWTP). The site, which has long been favored by a majority of Morro Bay City Council members and Cayucos Sanitary District (CSD) Board members, is adjacent to the current WWTP.

The site lies in a 100-year flood plain, and the map revision project appears to have been undertaken for the purpose of showing reduced flood levels in the area. The work was done by Wallace Group, under a contract issued to Environmental Science Associates (ESA). Residents only found out about the map revision project after new FEMA flood maps were issued.

An August 9, 2011 letter from the Federal Emergency Management Agency (FEMA) to Morro Bay Mayor <u>William Yates</u> notified Yates that, "The Flood Insurance Study Report and Flood Insurance Rate Map for your community have been revised by this Letter of Map Revision (LOMR). Please use the enclosed annotated map panel(s) revised by this LOMR for floodplain management purposes and all flood insurance policies and renewals issued in your community."

Open questions exist regarding the manner in which the map revision project was initiated and conducted, its long-term value, and the consultants who performed the project work.

Project Initiation and Management Issues

The map revision project appears to have been conducted "under the radar". It was not within the original scope of ESA's contract with the City and the CSD. Yet, it was done under the "umbrella" of that contract. The project was recommended by Wallace Group, the ESA sub-contractor who ended up doing the project work. After the project began, a <u>contract amendment</u> was requested to cover the cost of part of the work. A second contract amendment requesting additional funds followed 14 months later.

ESA was engaged by the City of Morro Bay and the CSD to prepare the Draft Environmental Impact Report (DEIR) for the new WWTP. ESA brought in Wallace Group as a sub-contractor to do a flood hazard investigation.

The flood hazard investigation is described in the "Scope of Work" section of ESA's contract, which is dated July 1, 2008. Under <u>"Task 2 Technical Studies"</u>, is this description of the work to be performed for the task: *"ESA proposes to prepare one stand alone technical study to inform the environmental setting information and impact analysis in the CEQA compliance document. The stand alone study will be appended to the environmental document for ease of reference."*

"Task 2.1 Hydrology Study

The Wallace Group will conduct a hydrology study of the project area as proposed in Appendix A of the Master Plan. The hydrology study will identify existing drainage patterns, flood control systems, and existing flood hazards. They hydrology study will identify changes to existing drainage patterns that would result from the proposed project, and identify hazards created to neighboring land uses by the proposed project. The study will develop a map of the revised 100-year flood inundation zone. The study will identify mitigation measure necessary to off-set the impacts of the revised floodplain. A more detailed scope of work for the drainage study is included in Appendix A of the Wastewater Treatment Plant <u>Facility Master Plan</u>." This is the complete text

Exĥibit 6 A-3-MRB-11-001 163 of 363 for Task 2. There are no other sub-tasks in the original contract.

Wallace Group performed the work described for Task 2.1 and, on August 11, 2009, their study, <u>"Morro Bay</u> <u>Cayucos Sanitary District Wastewater Treatment Plant Flood Hazard Analysis"</u> was published. The study contains the required information as specified in the ESA contract, including a number of maps of the revised 100-year flood inundation zone, based on various scenarios. The maps are labeled as Exhibits 4.1 through 4.13b. The completion of the Flood Hazard Analysis ended the work described under Task 2 in the original ESA contract Scope of Work.

Although the original Scope of Work includes no tasks regarding a FEMA flood map revision, a June 25 letter from Tom Barnes, of ESA, to Bruce Ambo, then Morro Bay's Director of Public Services, mentions a task 2.3. The letter indicates that task 2.3 was part of the original contract.

Barnes asked for a contract amendment, stating that "The application to FEMA for a Letter of Map Revisions (LOMR) was listed as Task 2.3 in the original scope of work and budgeted at \$6,800. Due to the discovery of inconsistencies in the original FEMA study and the complexity of the hydraulic analysis, the scope of work to prepare the LOMR application has expanded. A list of additional tasks required to prepare the LOMR is included in the attached contract amendment request from Wallace Group. The additional budget requested to complete Task 2.3 is \$20,580, which includes \$19,600 for Wallace Group's scope plus \$980 for ESA administrative and management costs."

In fact, the map revision project appears to have originated with a Wallace Group recommendation contained in the August 11, 2009 Flood Hazard Analysis: "The City floodplain management ordinance and funding agencies require that WWTP improvements be protected from flooding to the level of one foot above the 100-year flood elevation. Because of the potential reduction of flood levels relative to the current FIRM, we recommend that a Letter of Map Revision (LOMR) be applied for, including new hydrology and new hydraulic analyses. The LOMR process typically takes 3 to 6 months for complex situations such as this." (emphasis added)

The contract amendment was evidently approved. Wallace Group proceeded with the FEMA flood map revision project that it had recommended, and the work continued through the remainder of 2009, all of 2010, and well into 2011.

The project continued despite the fact that in November, 2010, the City and the CSD received a <u>12-page</u> <u>California Coastal Commission (CCC) report</u> that cited many serious flaws with the proposed WWTP site upon which the map revision study was focused. The CCC subsequently took over permitting authority for the WWTP project.

The City and the District were compelled by the CCC's actions to initiate an alternative site study. Consideration of alternate sites would appear to indicate the possibility that the favored site would not be the final choice for the new WWTP. However, the map revision project was not suspended pending study results.

Long-Term Value of the New Flood Maps May be in Question

The long-term reliability of the results of the map revision study may be questionable, and its value may be limited even if the favored site is chosen as the location for the new WWTP. There is evidence to suggest that flood patterns in the area are significantly affected by ongoing and fairly rapid changes in the configuration of sand dunes, and ongoing buildup of sediment in a nearby section of Morro Creek. Flood inundation patterns are reported to have changed substantially within a recent eight-year period. The useful life of the new WWTP has been estimated to be thirty years.

Much of the topographical information on which the new map is based came from a 2001 floodplain study done for the Morro Bay Power plant. The Power Plant study was done by West Consultants. Using FLO West developed a two-dimensional flood model for an area that includes both the Power Plant and the favored WWTP site.

Wallace Group consultants reported in 2009 that they had modified the work done by West, "to include topographical changes over the past eight years." Wallace Group "obtained and revised the original FLO-2D files with current dune topography and analyzed the flood hazard under existing conditions."

Among the topographical changes cited by Wallace are significant changes in sand dune configurations: "The main modification to the base model was to incorporate current dune topography based on survey information gathered in February, 2009. As suspected, the dunes have changed since 2001, gaining an additional 2 feet in height at a critical outlet location at the end of Atascadero Road." (emphasis added)

Also cited was a localized problem with creek sedimentation: "The capacity of Morro Creek in the vicinity of Main Street/Hwy 1 is limited due to channel geometry, restrictions at bridge openings and a build-up of sediment in the main channel. A depth gage at the Hwy 1 bridge indicates that sediment depth is 6 feet at that location."

The floodplain map results obtained by West, in 2001 and Wallace Group, in 2009 differed significantly. The fact that Wallace Group consultants indicated that the main modification to the 2001 model was the incorporation of information regarding changes to the dune topography may indicate that the accuracy of any floodplain map of the area is, at best, temporary. The Dunes are known to be in a constant state of transformation due to the effects of natural forces.

Information in Wallace Group's 2009 Flood Hazard Study appears to indicate that human activity also plays a significant role of flooding patterns. The Study says that, "Staff coordinates with the neighboring Hanson Aggregate owners regarding the orientation of their yard and supplies. Flood waters from the southeast first cross the Hanson property. When Hanson has stock on hand of large concrete block, they store the blocks on-site in a manner that directs flood waters to Atascadero Road rather than through the WWTP." The reliability of a flood inundation map in an area where the location of a stack of concrete blocks can markedly alter floodwater inundation patterns may be questionable.

In addition to the impacts of ongoing natural forces and human activity, the accuracy, and thus the value of the new flood map may be impacted by the demolition and removal of the current WWTP. Its presence appears to have played a role in the Wallace flood plain modeling work. The 2009 Flood Hazard Study states, "In addition, the model was reviewed to determine if the current WWTP building layout and areal coverage were correctly accounted for in the model. Some minor adjustments were made accordingly."

Based upon Wallace Group's evidence and commentary, nature appears to be the biggest factor in altering flood patterns. Government agencies have considerable authority to manage development and other human activity in order to protect critical infrastructure from actions that might increase flooding risks. The same cannot be said for naturally-occurring changes such as the shifting of sand dunes and the sedimentation of creek beds.

The changes in the dunes and the sedimentation of the creek appear to have had a measurable and significant effect on the floodplain configurations over an eight-year timespan. As a result, the long-term viability and value of the new flood map has been called into question, as has the potential for developing reliable, long-term flood risk mitigation measures for a new WWTP, should it be built on the favored site.

Consultant Issues

Residents have long questioned the processes used and the choices made by local governments when hiring consultants and managing their work. Issues include the repeated use of the same, apparently-favored consultants despite reports of past performance issues. Also cited is the fact that consultants are often hiring the interval of the same of the same

as sub-contractors for other consultants, increasing the potential for excessive costs and depriving residents of any oversight of the selection process.

The path followed by Wallace Group, as it recommended and subsequently executed the FEMA flood map revision project provides examples of some of the issues residents are concerned about. The following timeline highlights key events:

September 2007: Carollo Engineers issues its Facility Master Plan for the new WWTP. In Appendix A is a letter written by Wallace Group. The letter says that Wallace Group, which was working as a Carollo Engineers sub-contractor, has done a site review and developed initial recommendations. One recommendation is that further work be done to investigate flood issues.

July 2008: ESA, the City and the CSD sign a contract for ESA to produce the WWTP replacement project EIR. ESA brings in Wallace Group as a sub-contractor to do the work Wallace recommended in its letter published in the Facility Master Plan.

June 2009: ESA's Tom Barnes writes to Bruce Ambo, then Morro Bay Public Services Director, asking for an amendment to the ESA contract and claiming that the FEMA LOMR project was task 2.3 in the original contract scope of work. The letter says the LOMR work was more complex than expected, and that an additional \$20,580 is needed to fund completion of the work. In fact the original contract Scope of Work contains no task 2.3, or any other task relating to the FEMA LOMR (flood map revision project).

August 2009: Wallace Group issues a flood hazard study, in which it recommends the FEMA LOMR work that had been referenced in ESA's June letter.

July 2010: Wallace is hired to co-manage WWTP project after being recommended in a staff report submitted by Bruce Keogh, WWTP manager.

September 2010: In a second contract amendment request, ESA asks for more money to pay Wallace for its work on the FEMA LOMR project. Wallace Group's billings had exceeded its ESA contract limit. According to Morro Bay City staff, ESA's request for more money to pay Wallace Group was denied.

July 2011: Correspondence between FEMA and Wallace Group indicates Wallace Group is still working on the map revision project. Wallace Group was, at the same time, working with Dennis Delzeit to manage the WWTP replacement project. Whether Wallace included charges for its map revision project in billings for the billings submitted for its WWTP project management activities is unknown as of this writing. According to a City staff report, under the project management contract, Wallace was to perform various engineering tasks, as required.

The use of the Wallace Group as a consultant has been a source of concern for some residents, who have cited recent news stories regarding the firm's problems in south San Luis Obispo County, and have asked why a contractor with so much apparent "baggage" is continually re-hired to do more contract work. Several Cal Coast News stories have revealed serious allegations. The stories include, <u>"Grand Jury finds conflict of interest with Wallace Group"</u>, "Wallace found responsible for sewage plant deficiencies", "State finds fraud and deception at sanitation plant", and several others.

Issues regarding Carollo Engineers and ESA have also been raised. Portions of the Facility Master Plan done by Carollo had to be redone later, and the DEIR prepared by ESA was found by the CCC to be so badly flawed that it may have to be completely redone. The manner in which ESA managed Wallace's work has also generated concerns. ESA's references to the FEMA map revision project, which was not in the original contracted Scope of Work, are puzzling, and costs for ESA sub-contractor Wallace Group's work significantly exceeded original estimates.

Exhibit 6 A-3-MRB-11-001 166 of 363

Madeline Cavalieri

From:Linda Stedjee [Istedjee@charter.net]Sent:Tuesday, November 01, 2011 7:24 AMTo:Madeline CavalieriSubject:Water reclamation survey for Morro Bay-Cayucos WWTPHi.

As you may be aware, the Morro Bay Council majority and Cayucos Sanitary District Board majority have strongly opposed any effort to include water reclamation in plans for the new WWTP. In fact, many of us believe they have gone out of their way to make reclamation look like a bad idea.

This article in the SLO Coast Journal appears to show the latest attempt to evade this LCP and CCC requirement: <u>http://slocoastjournal.com/docs/news/wwtp_survey.html</u>

The article states,

The handling of the survey—out of sight from the public—may also raise questions about whether the state's open meeting law, the Brown Act, was violated in the process. But city attorney Rob Schultz says it was not.

No basis for the cost—\$2,000 per acre foot—of the water is provided in the survey. And Schultz said he had no immediate explanation of it.

and

As one resident who has been following the WWTP issue for years said: "They are trying to shock the people into stating, 'No way will we pay that price for recycled water,' so most people will fall right into their hands and the JPA will say see, I told you so—it is too expensive to recycle, and no one wants to pay!"

How many actually have been made aware of the opportunity to participate in the survey is unknown because the letter to 300 addresses announcing the survey and some emails sent around circulating information about the survey also included a link where anyone can vote (Survey Monkey). However, the survey's requested information and questions clearly are geared toward commercial users of water.

No surveys of residents about use of reclaimed water in their homes is planned, Schultz said.

This sounds to me like an attempt to scam the public with invalid information and by keeping them out of the loop.

I keep thinking of the PERC plant that was proposed, and how it would have cost many millions less than the scheme that is being pushed on the public AND would have delivered clean water ready for reuse.

Exhibit 6 A-3-MRB-11-001 167 of 363

11/1/2011

At any rate, I highly recommend reading the article as soon as you can in order to keep up with the latest apparent scheme to circumvent the CCC's requirements.

Linda Stedjee
From:Linda Stedjee [Istedjee@charter.net]Sent:Friday, November 04, 2011 2:19 PMTo:Madeline CavalieriSubject:Fwd: Re: PRA requestHello,

FYI, I would like to share the email message exchange that follows this message. It was triggered by some residents' concerns that the alleged costs for water reclamation as part of the Morro Bay-Cayucos WWTP replacement project appeared rather inflated. So, I asked where those costs came from and, as you will see from the messages, the City was unable to give me any concrete answers.

Here are the costs as stated on page 8 of the WWTP site fine screening done by Dudek:

Table 2. MBCSD Water Supply By Source – Average Cost Per Acre-FootWater Source Average Cost Per Acre-Foot*

State Water Project \$1,570* Brackish Reverse Osmosis \$980* Seawater Reverse Osmosis \$1,540* Local Wells \$125* Recycled Water \$2,500 to \$25,000**

HOWEVER, A very interesting City of San Diego Web site on water recycling: http://www.sandiego.gov/water/recycled/faq.shtml#cost

says that,

The monetary savings are substantial when using recycled water. The cost for recycled water is .80 cents per hundred cubic feet (HCF) of water, which is equal to 748 gallons. This is a tremendous deal when compared to the current potable water rate which is about \$1.91 per HCF.

Drawing on my degree in math from U.C. "Berzerkley" :-) I came up with the following calculation:

There are 325,851 gallons in an acre foot

325,851/748 = 435.63

435.63 x \$0.80 = **\$348.50** per acre foot.

And so, you can see my concern. That's a whole lot less than "\$2,500 to \$25,000" What is San Diego doing right that the City of Morro Bay and the Cayucos Sanitary District are doing wrong?

Exhibit 6 A-3-MRB-11-001 169 of 363

11/16/2011

Were the City and the CSD factoring in the cost of a recycled water distribution system like San Diego has? Is that how they got the numbers so high? If so, did they calculate the amount of time it would take to recover the cost of that system ((a sure thing, since the recycled water costs so much less)? Did they consider the costs of reclaiming water using a more sophisticated technology such as that used in PERC Water plants? In my opinion, probably not.

I also found a site run by the State of Virginia, in which it was stated,

In states where water reuse is well established, such as California and Florida, the cost of reclaimed water to end users is less than or equal to the cost of drinking water. The cost of reclaimed water to end users in Virginia is expected to follow the same pricing trends to encourage reuse of reclaimed water.

AND, the San Diego and Virginia sites were on the first page of hits I got with my search. I have no doubt that there are many other sites on the Web that clearly state that would confirm that recycled water is a good deal.

I also want to emphasize that recycling of water is especially important here, since our water supply is so precarious. State Water is proven unreliable (could be and has been drastically cut) and our well water usage is tightly controlled. For more information on just how tight our water supply is, I would suggest contacting Chuck Rich with the State Water Board

Linda Stedjee

------ Original Message ------Subject:Re: PRA request Date:Fri, 04 Nov 2011 13:06:02 -0700 From:Rob Schultz <RSchultz@morro-bay.ca.us> To:Linda Stedjee <lstedjee@charter.net> CC:Andrea Lueker <ALueker@morro-bay.ca.us>

Hi Linda,

There might well be calculations or other documents that show how the derivation was done but the City is not in possession of them therefore all I can produce for you is the two reports.

There are no documents that describe how the survey recipients were selected.

Rob Schultz City Attorney City of Morro Bay 595 Harbor Street Morro Bay, 93442 (805) 772-6568 (office)

> Exhibit 6 A-3-MRB-11-001 170 of 363

11/16/2011

(805) 772-6572 (fax)

This message may contain confidential or privileged information. If you received this message in error, please contact the sender and then delete this message from your system. >>> Linda Stedjee <lstedjee@charter.net> 11/4/2011 12:25 PM >>> Hi,

Thanks. I will check the Water Reclamation Feasibility Study and the Alternative Fine Screening Analysis, but if they were used "to derive this estimate" that seems to imply that there are some kind of calculations or other documents that show how the derivation was done. I don't know if I ever mentioned it, but I got my degree in math from U.C. Berkeley, where I was trained that you must show the work that leads to the answer, or the answer is potentially meaningless. I still subscribe to that principle.

So, I would like to see documentation that describes exactly how the number was arrived at.

With regard to the survey, I do understand that it was to gauge the demand for reclaimed water use, and the fact that you chose owners of properties over 2.5 acres and business entities as the survey recipients. That is helpful to know. However, I would like to know how the particular properties and businesses were selected. Was it random? Were certain kinds of businesses chosen - or did it go to all businesses and all property owners whose land is over 2.5 acres? I would like to see the documents that describe how the survey recipients were selected.

Thanks,

Linda Stedjee

On 11/4/2011 10:04 AM, Rob Schultz wrote:

Linda,

The two documents used to derive this estimate would be the 1999 Water Reclamation Feasibility Study and the Alternative Fine Screening Analysis. Both reports are available on the website.

The survey was mailed out to approximately 300 property owners (greater than 2.5 acres) and businesses in and around Morro Bay and Cayucos (within 3 miles of the City or District limits) to gauge the demand for reclaimed water use.

Exhibit 6 A-3-MRB-11-001 171 of 363 Rob Schultz City Attorney City of Morro Bay 595 Harbor Street Morro Bay, 93442 (805) 772-6568 (office) (805) 772-6572 (fax)

This message may contain confidential or privileged information. If you received this message in error, please contact the sender and then delete this message from your system. >>> Linda Stedjee Linda Stedjee https://www.system.com Linda Stedjee https://wwww.system.com Linda Stedjee <a href="https://www

This is a Public Records Act request.

Jack McCurdy's article in the SLO Coast Journal regarding a water reclamation survey sent to 300 residents indicates that a cost of \$2,000 per acre foot of reclaimed water was quoted in the survey. I would like to see the any and all documentation that was used to derive this estimate. '

I would also like to see any and all documents that explain how the 300 people were chosen to receive the surveys,

Jack's article is at http://slocoastjournal.com/docs/news/wwtp_survey.html

Thanks,

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 172 of 363

RECENTED

NOV 2 1 2011

November 15, 2011

California Coastal Commission, Central Coast Area

Dear California Coastal Commissioners,

I am writing in regard to the Morro Bay – Cayucos wastewater treatment plant (WWTP) replacement project. A water reclamation interest survey titled "MBCSD Reclaimed Water Survey" (attached), recently distributed to 300 individuals and businesses, has raised concerns among some residents.

One issue is the "surprise" aspect. Residents were not made aware that any survey was planned, and only learned of its existence after it had been distributed to 300 residents and businesses. Possible Brown Act violations have been alleged.

The Brown Act issue, along other issues with the survey, are discussed in the attached SLO Coast Journal article, "Surprise WWTP Water Survey Raises Hackles" (attached). The Journal story also includes an allegation that the survey content may have been engineered to discourage reclaimed water use. According to the story, "As one resident who has been following the WWTP issue for years said: "They are trying to shock the people into stating, 'No way will we pay that price for recycled water,' so most people will fall right into their hands and the JPA will say see, I told you so—it is too expensive to recycle, and no one wants to pay!".

The story notes that the City Attorney was unable to provide any justification for the \$2,000 per-acre-foot figure given. I also tried to obtain cost justification information. The City Attorney told me, "The two documents used to derive this estimate would be the 1999 Water Reclamation Feasibility Study and the Alternative Fine Screening Analysis. Both reports are available on the website." And, "There might well be calculations or other documents that show how the derivation was done but the City is not in possession of them therefore all I can produce for you is the two reports." Neither report provides any justification for the alleged \$2,000 cost stated in the survey.

A Rock of the Coast story, "Morro Bay-Cayucos Reclaimed Water Survey Questioned by Residents" (attached) also addresses cost issues, and addresses additional survey concerns including limited distribution, failure to provide sufficient information on water reclamation uses and benefits to survey recipients, and a questionable list of "constituents" that may be present in reclaimed water.

The "constituents" appear to some of us to have been included for the sole purpose of making the reclaimed water appear potentially dangerous and undesirable. In some cases, the items in the list are not "constituents" at all, but attributes or characteristics of water. Ammonia and nitrates are listed, even though they are generally removed by standard wastewater treatment processes. Alkalinity and pH are listed, even though these are easily adjusted in the treatment plant or by the water user. Salts are listed, even though the survey questions says that there are plans to use reverse osmosis to remove salts from the water.

The survey included little information on potential reclaimed water uses, and no information to dispel concerns or myths about reclaimed water. By contrast, other communities actively encourage water reclamation and recycling. One excellent example that I am sure you are familiar with is the City of San Diego which, like so many other communities, has a successful and growing water reclamation and recycling program.

As noted in some of my earlier communications to you, some of us believe that officials and staff of the City of Morro Bay and the Cayucos Sanitary District (CSD) do not want to reclaim water as part of the WWTP project because they want the water from the new WWTP to be made available to be reclaimed and used by a huge development planned for the adjacent power plant property. Were the water to be reclaimed at the new WWTP, it would be very difficult, if not impossible, for the City and the CSD to justify giving it to the development – especially given the very precarious state of Morro Bay's water supply.

I ask that you and/or your staff review the attached survey, and consider providing the City and the CSD with guidance on preparing and distributing a REAL water reclamation survey – one that:

- is designed and distributed with appropriate resident knowledge and participation
- is provided to all residents (as you know, in many communities, reclaimed water is used to water residential lawns and gardens)
- is supplemented by the kind of factual and useful information provided by San Diego to its residents
- includes reasonable cost information based verifiable facts and calculations.

Exhibit 6 A-3-MRB-11-001 173 of 363 Thank you for considering the concerns of Morro Bay residents.

Sincerely,

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At

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442 Istedjee@charter.net

cc: Madeline Cavalieri

Exhibit 6 A-3-MRB-11-001 174 of 363

MBCSD Reclaimed Water Survey

Reclaimed Water Survey

The City of Morro Bay and the Cayucos Sanitary District are in the process of upgrading the wastewater treatment plant. As part of the Wastewater Treatment Plant Upgrade the City and Sanitary District are in the process of updating the Comprehensive Recycled Water Study conducted in 1999. A copy of the 1999 Recycled Water Study is available on the City of Morro Bays website at, http://www.morro-bay.ca.us/index.aspx?nid=352. In order to update that study the City and District are investigating potential interest in a water reclamation program.

You have been identified as a potential customer for reclaimed water based on your type of water use and proximity to the existing wastewater service area. We respectfully request a few minutes of your time to complete this survey and return it to us to help us examine the potential to reclaim wastewater in our service area.

The type and location of reuse will influence a number of factors; required level of treatment, type and extent of regulatory requirement imposed, and ultimately the cost of the reclaimed water. Potential reuse scenarios envisioned by the City and District include irrigation of agricultural crops, irrigation of landscaping, parks and public facilities, and industrial reuse.

Currently the City and District are estimating that the cost for producing and delivering reclaimed water at approximately \$2,000 per acre foot (\$4.59/Hundred Cubic Feet-HCF). This cost is based on delivering approximately 400 acre feet per year of reclaimed water using a reverse osmosis treatment technology to remove salts and nutrients, install necessary distribution infrastructure, and operations and distribution costs. These costs could change significantly depending on how the program actually develops but are included herein as an order of magnitude to help you gauge your interest.

The City and District would appreciate your efforts in answering the following questions to the best of your ability. This will assist us to get a better understanding of your interest in using reclaimed water. We recognize you may not have sufficient information to answer all of the questions to the best of your ability. This information will be adequate for a preliminary planning level survey. As we move forward with the development of the reclaimed water program there will be opportunity to revisit and fine tune this information.

Please return the competed survey to the City of Morro Bay Public Services Department at 955 Shasta, Morro Bay CA 93442, attention Bruce Keogh or complete online at https://www.surveymonkey.com/s/MBCSD_REC_H2O_SURVEY by November 7, 2011.

*1. Please provide the following information so that we can contact you regarding your potential reclaimed water use.

Name:	
Company:	
Mailing Address:	
Reclaimed Water Site APN:	
Mailing City/Town:	
State:	
ZIP:	
Country:	
Email Address:	

Fage

Exhibit 6 A-3-MRB-11-001 175 of 363

	otential types of reclaimed water use.
	Stential types of reclaimed water user
Industrial/Process	
Other (please specify)	
^k 3. Would you be interested	d in purchasing reclaimed water? If not at the projected cost
2,000 per acre foot, what p	rice would be acceptable?
Yes	
No	
Other (please specify)	·
^K 4. What is the potential qu se? (please specify units a	antity of reclaimed water you would be able put to beneficial c-ft/year, gal/day, etc)
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⁴ 4. What is the potential qu se? (please specify units a Would your demand for re elow with appropriate units ercentage of your total den cre feet (mg or af)	antity of reclaimed water you would be able put to beneficial c-ft/year, gal/day, etc)
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Page 2

Exhibit 6 A-3-MRB-11-001 176 of 363

MBCSD Reclaimed Water Survey

In addition to the quantity of reclaimed water available, there are also issues associated with water quality and specific individual constituents within the reclaimed water stream, such as chlorides or nitrates which can have an impact on the end use. To the extent that you can, please provide any information related to your operation that may be impacted by water quality constituents, with specific numerical limitations if known. For example, certain crops may experience growth issues with chloride concentrations above a certain level.

6. Below is a partial list of potential constituents of reclaimed water known to impact certain types of reclaimed water use, please indicate if any are of concern to your operation.

pН	
Salinity	
TDS	
Sodium Absorption Ratio (SAR)	
Sodium	
Chloride	
Boron	
Bicarbonate	
Ammonia (NH4)	
Nitrate (NO3)	
Combined Nitrogen	
Others, please name	

7. Please provide any additional comments regarding reclaimed water

Please feel free to forward a copy of this survey to any anyone you believe will have a commercial, industrial, or agricultural interest in reclaimed water. If you have any questions please contact Bruce Keogh at 772-6272, or by email at mbwwtp@yahoo.com.

The City and Sanitary District greatly appreciate your time and effort to complete the survey. The results of this effort will greatly assist the City and District in assessing the potential future of a water reuse program.

Page 3

Exhibit 6 A-3-MRB-11-001 177 of 363

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Surprise WWTP Water Survey Raises Hackles

by Jack McCurdy

<u>Synopsis</u>: Attention was focused on the final review of three favored sites for the new Morro Bay/Cayucos wastewater treatment plant at their meeting on November 10 until a survey was mailed by the city on October 24 to about 300 residents asking if they would have interest in supporting a water reclamation program, which raised questions about the very high proposed cost of the water, whether that cost might purposely generate opposition, how the survey came about and whether it may have violated the state Brown Act by possibly being developed, approved and distributed without public knowledge.

With no forewarning, a survey was circulated among a select group of 300 Morro Bay and Cayucos residents on October 24 to gauge their "potential interest in a water reclamation program" that could be made possible by the new wastewater treatment plant now being planned by the two communities. One problem is the price of that reclaimed water cited in the survey is sky high, one resident and several water experts say, which they suspect may be by design.

The handling of the survey—out of sight from the public—may also raise questions about whether the state's open meeting law, the Brown Act, was violated in the process. But city attorney Rob Schultz says it was not.

No basis for the cost—\$2,000 per acre foot—of the water is provided in the survey. And Schultz said he had no immediate explanation of it.

But if that high cost scares people away from supporting a reclamation program, which has been a volatile controversy for years, maybe that is what the Cayucos Sanitary District board wants because it has opposed building a plant with capability to produce large quantities of high-quality recycled water for a long time. What the Morro Bay City Council wants still isn't clear, some residents feel, in the way of recycled water from the new plant.

In spite of the opposition of Cayucos and uncertainty of Morro Bay, the California Coastal Commission has stated flatly the Morro Bay's own Local Coastal Plan (LCP) "clearly requires the City to pursue water reclamation as part of this WWTP (wastewater treatment plant) project."

As one resident who has been following the WWTP issue for years said: "They are trying to shock the people into stating, 'No way will we pay that price for recycled water,' so most people will fall right into their hands and the JPA will say see, I told you so—it is too expensive to recycle, and no one wants to pay!"

JPA refers to the Joint Powers Agreement, under which the City Council and Cayucos Sanitary District board own and operate the present WWTP and are planning the new one.

A staff member of a state water agency said, "\$2000/acre foot of water is very expensive. If they keep harping on that point, they're not going to get any takers (among potential consumers). They don't want to do it, so they aren't thinking through ways to make it work."

An engineer with sewage plant experience said he thought the \$2,000 figure is very high, and he was trying to understand where that number came from.

If the reaction of residents who participate in the survey turns out to be as these two people predict, then Morro Bay and Cayucos (MB/CSD) can go to the California Coastal Commission staff, which has virtually mandated a

Exhibit 6 A-3-MRB-11-001 178 of 363 new plant with extensive capacity to produce top-quality recycled water in order to lower the cost of water in Morro Bay, and say the residents won't support it so it is a waste of time.

How many actually have been made aware of the opportunity to participate in the survey is unknown because the letter to 300 addresses announcing the survey and some emails sent around circulating information about the survey also included a link where anyone can vote (<u>Survey Monkey</u>). However, the survey's requested information and questions clearly are geared toward commercial users of water.

No surveys of residents about use of reclaimed water in their homes is planned, Schultz said.

Until the survey popped up, the focus was expected to be on the next JPA meeting scheduled for Thursday, November 10, starting at 6 p.m. at the Morro Bay Community Center, when a follow up report on fine screening of the three top-ranked sites for a new plant is expected to top the agenda. Those three sites, starting with the top-rated are the current WWTP site,160 Atascadero Road, Morro Bay: the Chevron Facility Hillside Site, located northeast of the city off Toro Creek Road at the Morro Bay-Cayucos boundary line in the county, and the Righetti Property, east of the city on Highway 41. No estimated distance to the Righetti property was provided.

For a map showing the locations of these three sites and others that were considered, see Figure 1 at Page 7 in the (<u>Rough Screening Alternative Sites Evaluation</u>) prepared by Dudek engineering for MB/CSD and described in last month's Journal (<u>Slo Coast Journal</u>).

One key reason that the current WWTP site is ranked first in the rough screening evaluation is because it is the only one among the 17 reviewed in the evaluation that is not assigned a "minus" in the category of "implementation" on the basis of expected "project delay (of) approx. 4-5 yrs. for prelim design, environmental review & local permitting."

The Dudek evaluation explains that potential alternative sites which would require a significant amount of additional planning, environmental analysis, development review and project design would result in "delaying required upgrades to the existing wastewater treatment system necessary to ensure compliance with current (federal operating) permit requirements in a reasonable time frame and/or would require permit modifications or the issuance of a new...permit..."

But it doesn't explain why the top-ranked current WWTP site would not also require such planning, analysis, development review, and project design, especially if the planned plant is designated to be a "new project," as the California Coastal Commission (CCC) staff has insisted it is, and not an "upgrade" that MB/CSD continue to call it in the face of the CCC saying it is not an upgrade. The clear assumption in the evaluation is that building on the present WWTP site would not face delays to meet those planning and permitting requirements that the others would—without explaining why it wouldn't.

Or possibly MB/CSD assumes that the design work done to date, most of it by Montgomery Watson Harza (MWH), is mostly or completely finished, and therefore little, if any, additional time would have to be spent on these planning tasks. In that case, it would have to assume that the preliminary project design by MWH is sufficient to meet all these requirements, despite the serious questions that have been raised around the country about MWH's integrity and trustworthiness (Slo Coast Journal.com - October 2010/October).

As was reported in the October 1 Slo Coast Journal (<u>Slo Coast Journal.com - WWTP Floodzone</u>), the current WWTP appears to be located at least partially in a 100-year flood plain and in a tsunami zone on the shore of Estero Bay in violation of the city's own LCP, as the Coastal Commission has emphasized. Some thought that based on a recently-released new map of that flood plain, MB/CSD might argue that it is not in the flood plain and, therefore, would not be excluded from consideration, as the Coastal Commission concluded is must be.

Exhibit 6 A-3-MRB-11-001 179 of 363 However, the Dudek evaluation does concede that the WWTP site is in the "100 yr flood zone (portion)." In other words, part of the site is. It would seem obvious that if that site were proposed by MB/CSD for construction of a new plant, it would be proposed on that "portion" that is not in the flood zone (if it is established that there is such a portion). But the evaluation does not explain whether that is the case.

The evaluation also acknowledged that the WWTP site has negative aspects under "Public Access/Recreation" because of its "proximity to (the) ocean" and under "Visual Resources" because of its "proximity to (the) shoreline." On both counts, the Coastal Commission found the site would be unacceptable because it would be inconsistent with the LCP, which requires the WWTP area to be used for recreational purposes and that public views not be obstructed by a new and larger WWTP building.

As far as whether all this would allow the WWTP site to qualify for a required Coastal Development Permit from the CCC to build, the evaluation said that will require additional study. What that means is not explained.

What all this underscores is how nebulous the sites evaluation is and the many questions it leaves unanswered.

In spite of all the apparent uncertainties surrounding the three sites (all the other 14 sites were eliminated for further review based on the criteria used by Dudek, which some find questionable), reactions to the controversial water survey that was just distributed may compete for attention at the JPA meeting.

Perhaps the biggest question about the survey is its origin, even eclipsing the cost.

In answer to questions about the authorization of the city staff by the City Council to conduct the survey, Schultz said the "CCC Staff requested that the City update the market research for reclaimed water prior to the de novo hearing," which is the key, potentially-final CCC hearing on the project that Dudek now says it expects to take place next March or April, "and staff said ok and sent out the survey."

"The survey was a part of that work effort," he continued. "No discussions occurred with City Council regarding the survey and there was no violation of the Brown Act in regard to the survey. Council authorized staff to work with CCC Staff to bring the project to a de novo hearing. This direction occurred when it authorized the CCC approval process work plan earlier this year. The survey is part of that work effort."

Several questions seem apparent. One, when and in what form did the City Council, and possibly the CSD board, authorize the staff to work with the CCC staff to develop the project so it could be submitted to the CCC in final form? What specifically was authorized—to develop the project, including conducting such a survey, with no oversight by the two elected bodies? If there were no discussions among the two bodies and their staffs, how could they be informed about the nature of the survey and its contents?

And if there was no such oversight, how could the community be informed about it as well as be afforded an opportunity to make comments on it before it was implemented? Presumably, if the Council was informed about the details of the survey, it would have been in public session, which it apparently was not because the details were not available until recently after the staffs met with the CCC staff a few weeks ago.

Is Schultz saying that the staffs met with the CCC staff, it requested the city to update its market research for reclaimed water, the staff went ahead and did it—without informing the Council? It seems so, at least in public.

If that is the correct scenario, could that be a violation of the Brown Act (Govt. Code §§ 54950-54960.5), which requires public business to be discussed in public, unless it is noticed for closed session under certain conditions—this obviously not being one of them.

Do provisions of the Brown Act obligate the City Council and CSD board to approve such a survey in public before it is sent out in order to enable residents to become aware of it and give them opportunities to A-3-MRB-11-001 A-3-MRB-11-001 180 of 363 beforehand? If not, is there any limit to the latitude that the two bodies can bestow on the staffs to act in their behalf without informing the pubic?

Section54950 of the Brown Act states:

In enacting this chapter, the Legislature finds and declares that the public commissions, boards and councils and the other public agencies in this State exist to aid in the conduct of the people's business. It is the intent of the law that their actions betaken openly and that their deliberations be conducted openly. The people of this State do not yield their sovereignty to the agencies which serve them. The people, in delegating authority, do not give their public servants the right to decide what is good for the people to know and what is not good for them to know. The people insist on remaining informed so that they may retain control over the instruments they have created.

Section54954.3.(c) states:

The legislative body of a local agency shall not prohibit public criticism of the policies, procedures, programs, or services of the agency, or of the acts or omissions of the legislative body.

By giving the staffs such broad powers at some point in the distant past to act privately without public community—knowledge, if not oversight, were these sections of the Brown Act violated, at least in spirit, by distributing the survey without providing residents a prior opportunity to even become aware, much less comment, given its very controversial contents and enormous importance to Morro Bay's future supply of quality, affordable water?

> Exhibit 6 A-3-MRB-11-001 181 of 363

Print

Written by Linda Stedjee Tuesday, 08 November 2011 16:59

Morro Bay-Cayucos Reclaimed Water Survey Questioned by Residents

Some residents of Morro Bay and Cayucos have noted that the Morro Bay City Council and the Cayucos Sanitary District (CSD) Board appear reluctant to include water reclamation facilities in the Morro Bay-Cayucos wastewater treatment plant (WWTP) replacement project. To some, a water reclamation survey recently sent to 300 residents appears seems to indicate continued resistance to water reclamation.

Two major issues with the survey have been cited. One is the projected cost of the water. According to the survey, "Currently the City and District are estimating that the cost for producing and delivering reclaimed water at approximately \$2,000 per acre foot (\$4.59/Hundred Cubic Feet-HCF). This cost is based on delivering approximately 400 acre feet per year of reclaimed water using a reverse osmosis treatment technology to remove salts and nutrients, install necessary distribution infrastructure, and operations and distribution costs." It has been noted that the cost appears high compared to reclaimed water costs in other communities.

The second issue identified by residents is the survey's list of "potential constituents of reclaimed water known to impact certain types of reclaimed water use". Survey participants were asked to identify potential reclaimed water "constituents" of concern to them. In addition to those listed, space was provided to enter additional items.

While the list may be aimed at determining the treatment requirements for the water, tailoring treatment facilities to the needs of a small number of potential users could limit future uses of the water. In addition, to some, the list appears to be aimed at discouraging use of reclaimed water by making it appear undesirable and potentially harmful.

It has been alleged that the high estimated cost for the reclaimed water, along with the list of "potential constituents" were part of a plan to ensure that few survey recipients would indicate any interest in the water -- thus providing the City and the CSD with an excuse to avoid including any significant water reclamation facilities in the WWTP project.

Potentially-Insufficient Information Provided to Survey Recipients

The survey document did not provide its recipients with any significant information on beneficial uses for reclaimed water, nor did it refer recipients to other sources of information. By contrast, numerous other communities provide extensive information on the benefits of reclaimed/recycled water and encourage its use.

For example, the City of San Diego's list of beneficial uses is extensive: "irrigation of food crops, parks, playgrounds, school yards, residential landscaping, cemeteries, freeway landscaping, golf courses, ornamental nurseries, pasture for animals, orchards, and vineyards. In addition, recycled water can be used for fishing or boating recreational impoundments, fish hatcheries, cooling towers and decorative fountains. Other allowable uses include flushing toilets and urinals, industrial process water, commercial laundries, making artificial snow, soil compaction, mixing concrete and flushing sanitary sewers."

San Diego dispels myths and alleviates concerns that might discourage residents from using reclaimed water. For example, information provided to that city's residents includes the following facts: "There are various constituents in recycled water that exceed those found in the drinking water supply, including total dissolved solids (or salts). For example, although recycled water contains a slightly higher salt content, turf grass irrigated with recycled water will continue to flourish." and, "With proper drainage and good management, landscape irrigated with recycled water will continue to thrive. Moreover, there are some constituents, such as nitrogen and phosphorus found in recycled water. These constituents are beneficial for plant growth, and will serve as an additional 'fertilizing source.'"

San Diego provides its residents with answers to a list of frequently asked questions that include the following:

- Is recycled water safe?
- · Does recycled water smell or look different than tap water?
- · Are there any health or water quality laws that apply to recycled water?
- · Will constituents in the water, such as salts, harm landscaping?
- · Will there be damage to my car, my house, etc., if it is sprayed with recycled water?
- · What are the rules and regulations for recycled water use?

In contrast, the City of Morro Bay and the CSD have not provided this kind of information to the water reclamation survey recipients or to the general populations of the City and the CSD.

Potential Missed Opportunities -- Who got the Survey, Who Didn't, and Why?

According to the Morro Bay City Attorney, "The survey was mailed out to approximately 300 property owners (greater than 2.5 acres) and businesses in and around Morro Bay and Cayucos (within 3 miles of the City or District limits) to gauge the demand for reclaimed water use."

The City Attorney was asked for documentation that would provide further information on the survey recipient selection process. Questions posed included the following: "Was it random? Were certain kinds of businesses chosen – or did it go to all businesses and all property owners whose land is over 2.5 acres? The response from the City Attorney was, "There are no documents that describe how the survey recipients were selected."

Questions remain regarding potential users who may have been missed or passed over. A copy of the survey was available on the City of Morro Bay Web site, but its presence was not actively advertised to residents. As of November 9, the survey is no longer available for online viewing.

In many communities, reclaimed water is used to water residential yards, easing the strain on limited municipal water supplies and helping to prevent water rationing. However, the majority of residential property owners in Morro Bay and Cayucos were evidently excluded from the survey process

California Coastal Commission Position on Water Reclamation

If the CCC determines that the survey process was inadequate or improperly conducted, the City and the CSD might be required to re-do it. California Coastal Commission (CCC) staff members have noted that the City and the CSD failed to heed prior CCC direction regarding water reclamation requirements for the new WWTP.

In a November 12, 2010 letter to Rob Livick, CCC Coastal Planner Madeline Cavalieri pointed out numerous flaws in the Draft Environmental Impact Report (DEIR) that had been prepared for the WWTP replacement project. Among the flaws cited was the absence of "a plan for water reclamation that meets the expectations of the City of Morro Bay LCP, the San Luis Obispo County LCP, or recent actions of the Commission..."

Ms Cavalieri noted several major problems that threaten the sustainability of Morro Bay's water supply. Her comments are consistent with a local news story, "Morro Bay's Precarious Water Supply", published in the March, 2010 issue of the SLO Coast Journal. Ms. Cavalieri also stated that it was clear that the CCC "has clear expectations for meaningful water reclamation programs to be included in new wastewater facilities and projects."

Reclaimed Water Cost Issues

The survey states that the estimated cost of delivering reclaimed water to users is approximately \$2,000 per acre foot (\$4.59/Hundred Cubic Feet-HCF). This cost compares unfavorably to the City of Morro Bay's stated costs for delivering water from other sources. A recent report by Dudek Consultants includes the following data on the cost of delivering water from various sources: State Water Project \$1,570, Brackish Reverse Osmosis \$980, Seawater Reverse Osmosis \$1,540, Local Wells \$125. The data was provided to the firm by the City of Morro Bay.

With the estimated cost for reclaimed water so much higher than the stated costs for other water sources, potential reclaimed water users could easily be discouraged by cost alone. Cost of delivering water is not necessarily the same as the price at which it is sold to users. The price could potentially be higher.

A Public Records Access request was submitted to the City of Morro Bay for documentation that would show how the \$2,000per-acre-foot cost estimate was derived. Responses received from the City Attorney stated that, "The two documents used to derive this estimate would be the 1999 Water Reclamation Feasibility Study and the Alternative Fine Screening Analysis. Both reports are available on the website." And, "There might well be calculations or other documents that show how the derivation was done but the City is not in possession of them therefore all I can produce for you is the two reports." Neither report explains the \$2,000 figure.

The cost of reclaimed (sometimes referred to as "recycled") water in other cities is significantly lower. For example, according to a Web site describing its water reclamation and recycling program, the City of San Diego is currently selling its reclaimed water for .80 per HCF, which translates to 348.50 per acre foot. This is a low rate set to encourage use of the water. A pricing study recommended that, to avoid operating at a deficit, the 2012 rate should be \$1158.77. This figure is still substantially lower than the \$2,000 per acre foot figure stated in the Morro Bay-Cayucos reclaimed water survey document.

Exhibit 6 A-3-MRB-11-001 183/083681 6:02 AM Another example is the City of Santa Clara, where rates for reclaimed water are also substantially less than \$2,000 per acre foot. In that city, irrigation customers pay \$1.75 per HCF, which equals \$762.35 per acre foot, and industrial customers pay \$1.40 per HCF, or \$609.88 per acre foot.

A key cost factor often cited by other communities with water reclamation programs is usage level. Documentation produced by those communities indicates the need to actively encourage the use of reclaimed water, since the cost of delivering the water depends in part on the number of users and the amounts they use. By making the use of recycled water attractive to potential users, these communities have expanded their user base and thus lowered the cost of delivering the water.

By contrast, the survey distributed in Morro Bay and Cayucos not only fails to encourage the use of the reclaimed water, but appears, according to some residents, to discourage it, and its limited distribution may have also limited the number of responses indicating interest.

Reclaimed Water "Constituent" Issues

The introductory text in the survey indicates that, "The type and location of reuse will influence a number of factors; required level of treatment, type and extent of regulatory requirement imposed, and ultimately the cost of the reclaimed water." The survey further states, states, "Below is a partial list of potential constituents of reclaimed water known to impact certain types of reclaimed water use, please indicate if any are of concern to your operation." The list includes pH, Salinity, TDS, Sodium Absorption Ratio (SAR), Sodium Chloride, Boron, Bicarbonate, Ammonia (NH4), Nitrate (NO3), and Combined Nitrogen. The list is followed by four lines labeled, "Others, please name".

Some residents have found the list puzzling, for a number of reasons. No information is given on how, when, where, or why the listed "constituents" might impact a user's "operation". The survey does not indicate whether any of the listed items is, has ever been, a problem with treated effluent from the existing wastewater treatment plant, or whether there is reason to expect any of the "constituents" to be a problem with effluent from the new plant. In addition, inclusion of some of the "constituents" has struck some residents as odd, since standard wastewater treatment processes are designed to address them.

For example, introductory text in the survey document indicates that the City and CSD plan to use "a reverse osmosis treatment technology to remove salts and nutrients". Yet, the survey's list of potential "constituents" that might harm a user's operation includes "salinity" (a measure of the amount of dissolved salt in the water), "sodium chloride" (table salt), SAR (Sodium absorption ratio) and TDS (total dissolved solids). These potential problems could be eliminated through reverse osmosis treatment – a process that the City and CSD indicated they planned to use.

The inclusion of pH in a list of "constituents" of water is somewhat puzzling. All water has pH, which is a measurement of its acidity or basicity. pH adjustment is not difficult and is a normal operation in many water reclamation facilities.

Another list item is bicarbonate. Bicarbonate (HCO3) ions are the main alkaline constituent in almost every water supply. Alkalinity of water can be easily adjusted and/or compensated by the user, or can be adjusted in the treatment facility.

Boron is also listed. This element is present in most drinking water and the amount is not regulated by the US EPA although very high levels can reportedly impact human health and can harm crops. There are multiple processes for removing boron from reclaimed water, including reverse osmosis – a process that the City and CSD have stated they plan to use.

Ammonia and nitrates are customarily removed as part of the normal wastewater treatment process, and this fact raises questions regarding their inclusion in the list. There are a number of technologies used remove total nitrogen from wastewater. Bacteria are used to convert ammonia and nitrate to gaseous nitrogen, N2. In this form nitrogen is inert and is released to the air.

The inclusion of "combined nitrogen" in the list appears to be a redundancy. Nitrogen, an element that is essential to living things, can exist in a free state, or can be combined with other elements to form compounds including nitrate, nitrite, and ammonium which are also included in the list. As previously noted, these compounds are removed as part of standard wastewater treatment processes.

Will the Survey Results Have an Impact?

Residents of Morro Bay stand to benefit significantly from the availability of recycled water to supplement the City's precarious water supply. The CCC has made it clear that a serious water reclamation program is expected to be part of the WWTP replacement project. Numerous communities throughout the state and the country are undertaking ambitious reclamation

Exhibit 6 A-3-MRB-11-001 1**8**4/ g**f/36**81 6:02 AM programs to supplement increasingly-strained municipal water supplies. A recent SLO Coast Journal story by Jack McCurdy, "Surprise WWTP Water Survey Raises Hackles" discusses Brown Act concerns.

With residents raising questions regarding the quality, distribution, legality and intent of the survey, and with permitting of the new WWTP in the hands of the CCC, the impact of the survey results on the WWTP project remain in doubt.

This article belongs to category: Local

Exhibit 6 A-3-MRB-11-001 185 3729686:02 AM

From: Sent: To: Subject: Linda Stedjee [Istedjee@charter.net] Wednesday, November 23, 2011 12:33 PM Madeline Cavalieri 2009 letter shows Morro Bay and Cayucos knew existing plant would be almost totally demolished and replaced

Attachments:

august62009letter.pdf



august62009letter. pdf (3 MB)

Hello,

I have attached a letter that accompanied the first iteration of the Facility Master Plan for the new Morro Bay-Cayucos WWTP. I did not include all the attachments, just the text and one table. The full document, along with the FMP, version 1, is at http://camorrobay.civicplus.com/documents/Public%20Services/Wastewater%20Treatment%20Plant/WWTP% 20Upgrade/MBCSD FMP complete.PDF

A friend noticed some interesting material when he linked to it while reading a new article I wrote regarding the FEMA flood map shenanigans http://www.rockofthecoast.com/news/local/896-fema-flood-map-revision-new-concerns

My friend pointed out that the letter clearly states, in more than one place, that the most of existing WWTP will have to be demolished due to the flood hazards.

I suspect that you already picked up on this issue, but just in case, I wanted to mention it. My friend thinks it is very significant that the City and the CSD have insisted on calling this an upgrade project despite the fact that they have known since August, 2009 that the project was really a replacement of the existing facility.

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 186 of 363

From:	Linda Stedjee [Istedjee@charter.net]
Sent:	Friday, November 25, 2011 6:06 AM
То:	Madeline Cavalieri
Subject:	Morro Bay- Cayucos WWTP flood impact potential

Attachments:

femagraph1.pdf



femagraph1.pdf (2 MB) Hello,

A friend of mine has come up with something that seems very significant in terms of the potential flood impacts on the City and the CSD's preferred site. He reviewed a graph attached to the letter that FEMA sent the City after the new flood map was done. I had looked at the graph but did not grasp the significance. My friend is an engineer. Here is what he said about the graph: > it shows that in Morro Creek, where it crosses Highway 1, the water > will reach 28 feet above sea level which is 17 above the creek bottom!! > Just think of all of the trailers and debris that will flow across the > highway and try to get to the ocean!. > What a mess! > If they were to build the plant on "higher ground" at the south end of > the plant the water may not reach the buildings but all of the stuff > that is flowing down will overwhelm the buildings. The letter is at http://www.morro-bay.ca.us/documents/Public%20Services/Engineering/Draft%20LOMR%208 9 11.PDF I split out the graph from the rest of the letter. It is attached

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 187 of 363

Dear California Coastal Commissioners

I am writing in regard issues related to a FEMA flood map revision recently done for the area where the Morro Bay-Cayucos wastewater treatment plant (WWTP) is located, and where City of Morro Bay and Cayucos Sanitary District (CSD) officials and staff want to build the new one. The information contained herein is an update to the information provided in my letter of October 17, 2011. The new issues include:

- Flood "Debris" and Potential Drainage Channel Blockage
- Creek Sedimentation/Silting
- Flood Map Based on "Existing Conditions" .
- Flood Map Revision done "Under the Radar"
- Consultant Reliability/Competence

Flood "Debris" and Potential Drainage Channel Blockage

Of serious concern to some residents is the potential for flood "debris" to block any channels to the sea and quickly cause a major and sudden change in flood patterns and depth as the flood is occurring - meaning-that the actual flooding would be nothing like that predicted by the new map. In this case, I am not talking about what one might ordinarily think of as flood debris. I am talking about huge mobile homes the size of buses. This concern was brought to my attention by a local engineer who has studied and analyzed the situation and the data.

According to a graph attached to the FEMA letter sent to the City of Morro Bay when the new flood map was ready, the depth of the water in the creek at Highway 1 would be about 28 feet above msl and 17 feet above the stream bed.

MORRO CREEK MAIN STREET ELEVATION IN FEET INGVD 29 40 REVISED 30 SAN LUIS OBISPO COUNTY, CA AND INCORPORATED AREAS FEDERAL EMERGENCY MANAGEMENT AGENCY 20 LEGEND VISED REAC B C D A 3500 6500 1000 STREAM DISTANCE IN FEET ABOVE PACIFIC 35P Fast-moving water at this depth could, according to the engineer who raised this issue, pick up mobile homes and sweep them westward, depositing them in such a way as to dynamically create new drainage barriers during the flooding process.

Of concern are trailers and RV's from parks on the east side of the highway and from a small park that lies to the west of the highway, and not far to the east of the WWTP site. There is also the potential for other "debris" to be picked up at Hanson's Aggregates, which lies immediately to the east of the WWTP and within the flood plain designated in the new FEMA flood Exhibit 6 map. A-3-MRB-11-001

188 of 363

RECEIVED

DEC 02 2011 California Coastal Commission,

Central Coast Area



Following is an aerial image of the area.



Please note the presence of the small RV park to the east of the WWTP. This park lies in the 100-year flood plain. I am told that another one has been established nearby. In addition, please note the RV parks east of the highway. Some of the mobile homes there also lie in the 100-year flood plain. It is from these parks that my engineer colleague believes that mobile homes could easily be swept under the highway to the area of the plant and beyond, into drainage channels.

I don't believe that it would take many huge mobile homes to completely block the drainage anticipated in the data sent to FEMA by Wallace Group and/or to significantly alter the flood patterns shown in the new FEMA map as a flood was occurring.

Creek Sedimentation/Silting

Sedimentation in the creek bed may also be an issue. Since the water level chart accompanied the FEMA letter announcing the completion and issuance of the new flood map, and since it shows the level of the stream bed, it seems reasonable to assume that the level of the bottom of the stream bed is an important factor in predicting flood patterns in the area of the WWTP.

As pointed out by a local engineer, if the creek is full of sediment at the time of a flood, then there is less room in the channel for the water, and the amount that will end up outside the channel will be increased. It seems reasonable to assume that in such a situation, the actual flood water levels will be even higher than those predicted by the flood map, and flood inundation areas may be far more extensive than the new flood map indicates.

In the 2009 Wallace Flood Hazard Study, it is stated, "The capacity of Morro Creek in the vicinity of Main Street/Hwy 1 is limited due to channel geometry, restrictions at bridge openings and a build-up of sediment in the main channel. A depth gage at the Hwy 1 bridge indicates that sediment depth is 6 feet at that location."

A late-November, 2011 check of conditions at the bridge resulted in this report by the engineer referenced earlier in this letter: "I looked at the creek yesterday and noted the level of siltation filling the creek. On the side of the bridge column there is a "weir gauge" that shows the water level. The mud is up on that gage over 4 feet and what little water is flowing is above that."

The engineer also noted that the distance from the existing silt level to the bottom of the Highway 1 bridge is abo世系的命令 and that the bridge is approximately 30 feet wide. In his assessment, one mobile home washed by floodwager府语内的 189 of 363 could cause the bridge to become a dam. This would then force the water to find other passages to the sea, changing the flood patterns reflected in the new FEMA map.

Some potentially-useful information on how weather patterns affect silt levels in the creek was obtained from a maintenance worker at a business located near the bridge. He stated that when the high water comes in the normal years, it flushes the stream bed and carries the vegetation and silt away to the ocean. He did not state how long the process took, or how many storm events were required to remove all of the silt.

We do not know if the engineer who surveyed the situation in November, 2011 and the Wallace Group staff member who surveyed it in 2009 were looking at the stream gauge at the same time of year. However, given the levels of silt/sediment observed by the engineer and by Wallace Group staff, what does seem clear is that, after the channel is flushed out by the stream flows generated by winter storms, it fills up again, raising the stream bed by several feet.

In its 2009 study, Wallace Group appeared not to address the silting/sedimentation of the creek as a serious issue with regard to potential flooding in the WWTP site area. They identified the shifting of the dunes as the factor that has resulted in a major flood inundation pattern change in 8 years.

Flood Map Based on "Existing Conditions"

Another serious concern is the fact that the new map is based upon the presence of the structures in the existing plant. Yet, that plant is to be demolished and replaced. How will that affect flood patterns?

In the 2009 Wallace Flood Hazard Study it is stated, "*In addition, the model was reviewed to determine if the current WWTP building layout and areal coverage were correctly accounted for in the model. Some minor adjustments were made accordingly.*" I recently checked with the Morro Bay City Attorney to verify that the new FEMA map is based on the presence of the current WWTP. He replied that the map reflects "existing conditions".

The presence of structures in the flood area is evidently quite important in determining flood patterns. I say this because even a stack of concrete blocks can evidently significantly alter flood patterns in the area. In the 2009 Wallace Flood Hazard Study it is stated, "Staff coordinates with the neighboring Hanson Aggregate owners regarding the orientation of their yard and supplies. Flood waters from the southeast first cross the Hanson property. When Hanson has stock on hand of large concrete block, they store the blocks on-site in a manner that directs flood waters to Atascadero Road rather than through the WWTP."

I have found no information that would indicate whether the concrete blocks were taken into account in the data send to FEMA with the LOMR. Regardless of that, however, I believe that the reliability of a flood map in an area where the location of a temporary stack of concrete blocks can markedly alter floodwater inundation patterns may be questionable. If moving the blocks around alters the flood patterns that much, what will be the impact of demolition of the existing plant? What would be the impact of several large mobile homes being washed into the path of the oncoming flood waters?

Wallace Group's flood mitigation recommendations for the new WTTP are as follows:

"To address 100-year flooding issues:

- Construct the new WWTP facilities on higher ground. Construction on elevated fill provides the highest level of
 protection and least amount of operational inconveniences.
- Construct all or part of the new facilities on City owned land to the south of the current site that is already elevated, modeled in the analysis as MB10 through 12. Construction at this location will have the least adverse flood impact on neighboring properties.
- Reconstruct Atascadero Road with an inverted crown. This will reduce flooding for all properties along the road and nearly eliminate flooding at the high school for all but the most extreme storm events."

How would the flood map change if new "elevated fill" were to be placed next to the existing WWTP? What happens when the "elevated fill" and the new WWTP are there, and the old WWTP has been demolished?

Some "existing conditions:" may change quickly. As noted In my October letter, it seems likely that no flood map of the area can be reliable for long. This is because, as reported in a 2009 flood hazard study of the site, the constantly shifting sand dunes can alter drainage channels and significantly impact flood patterns. It was noted in the study that, due to the changed dune configuration, major changes in expected flood inundation patterns had occurred in just 8 years.

Flood Map Revision done "Under the Radar"

Exhibit 6 A-3-MRB-11-001 190 of 363 Some residents are concerned that the manner in which the flood revision study was conducted may have negative implications regarding its purpose and its reliability.

The LOMR for the map revision was submitted to FEMA by Wallace Group, which was at that time a sub-contractor for Environmental Science Associates (ESA). At the time the LOMR was submitted, ESA was developing the WWTP project EIR. Wallace Group is currently co-managing the WWTP project.

Although Wallace Group was being paid by the City of Morro Bay, the LOMR work, initiated in 2009, was never publicly discussed or formally approved by elected officials, and was not covered by any officially-approved contract. Wallace Group's 2009 recommendation that an LOMR be done appears to be the only mention of the idea (in any format available to the public) until the completed revised flood map was published.

Thus, Morro Bay residents, whose tax money paid for the work, were kept completely in the dark until the FEMA letter announcing the new flood map arrived and was published in late summer, 2011.

There was no official announcement or discussion of the fact that the FEMA flood map update had been initiated by Wallace Group on behalf of the City. Residents discovered that fact when they investigated, after concluding that the timing of the map update appeared suspicious. Considerable research, at times made difficult by apparent resistance from at least one City staff member, was required to discover the facts.

The fact that the entire map revision process was done "under the radar", without any public knowledge, has raised some serious concerns among some residents. Those issues include the possible motives for the map update.

As noted previously, the map revision project appears to have been undertaken for the purpose of showing reduced flood levels in the area of the WWTP site favored by the City and the CSD Board. According to the 2009 flood hazard analysis, which was done as part of the EIR process, "The City floodplain management ordinance and funding agencies require that WWTP improvements be protected from flooding to the level of one foot above the 100-year flood elevation. Because of the potential reduction of flood levels relative to the current FIRM, we recommend that a Letter of Map Revision (LOMR) be applied for, including new hydrology and new hydraulic analyses."

Consultant Reliability/Competence

Of concern to some residents is the reputation of Wallace Group, author of the Flood Hazard Study and of the LOMR. Stories published by a local online news source, "Cal Coast News" have revealed serious allegations regarding the integrity and competence of the firm. The stories include, "Grand Jury finds conflict of interest with Wallace Group", "Wallace found responsible for sewage plant deficiencies", "State finds fraud and deception at sanitation plant", and several others.

The actions of Dudek consultants have also raised concerns. How can they have failed to recognize the serious flood issues that are so obvious to residents? Yes, there are engineers and other technical experts among the concerned residents, but Dudek employs engineers, as does the City of Morro Bay.

The Dudek consultants certainly have access to all of the information that residents do. Yet, they seem to have failed to consider some very serious issues related to the flooding potential for the WWTP site favored by the City and the CSD. They also violated their own "fatal flaw" rule when doing the rough screening, and left the site in the running while eliminating others because they also lie in flood plains.

Thank you, as always, for your attention to the concerns of Morro Bay residents.

Sincerely,

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442

cc: Madeline Cavalieri

Exhibit 6 A-3-MRB-11-001 191 of 363



Exhibit 6 A-3-MRB-11-001 192 of 363

From: Ed Bischof [edbischof@yahoo.com]

Sent: Friday, December 09, 2011 11:56 AM

To: Madeline Cavalieri; Dan Carl

Subject: Morro Bay Waste Water Treatment Plant

Dear Mr. Carl and Ms. Cavalieri,

We feel fortunate to have the opportunity to live in Morro Bay. We are surrounded by outstanding natural beauty. Part of what we love about the town and surrounding community is the great job they have done to preserve the sand dunes, beaches and walking trails for everyone and every living thing to enjoy.

It is beyond belief that there are those on the city council that seek to steer this town into making a terrible environmental decision to keep the wastewater plant in it's current location near the bay. Our bay is our most precious resource and should not be dominated by the towers of the power plant or a waste water treatment plant.

The City Government needs to answer serious questions:

How can we rebuild such a major piece of infrastructure in the 100 year flood plain and the tsunami path?

How can we build a plant like this on the bay which is such a prime piece of our natural resource?

How can we try and kick this problem down the road to our children and grandchildren? sn't it our responsibility to leave them a legacy we can be proud of?

There are many experts weighing in on this topic far more knowledgeable about the science than we. Please consider their warnings and let rational and responsible reasoning prevail. The majority on the city council recommending the current site are being short sighted and exercising poor judgment in making this proposal. Please use your authority and provide the needed guidance toward making a sound decision that will serve our city and environment for future generations. Even if we all have to pay a little more now the long term cost benefits of moving the plant to a new location are immeasurable.

Sincerely, Ed and Monica Bischof Concerned citizens of Morro Bay

> Exhibit 6 A-3-MRB-11-001 193 of 363

12/9/2011

From:Jane & Walter Heath [heathdom@yahoo.com]Sent:Thursday, January 12, 2012 1:24 PMTo:Madeline CavalieriSubject:Morro Bay/Cayucos Waster Water Treatment Plant

Dear Ms. Cavalieri,

Thank you for the ongoing efforts of Coastal Commission staff to ensure that our community's waste-water treatment plant is constructed in a location which stands a reasonable chance of remaining above water during its useful life and which is designed in a manner that facilitates good stewardship of the resources placed in our care. It is a great comfort to know that there are people in positions of public trust who accept responsibility for the long-term health and well-being of our coastal resources. As someone who strives to co-exist among all of our resources in the least harmful way, I am very grateful for the conscientious way in which Coastal Commission staff conducts its business.

Best, Walter Heath 3020 Beachcomber Drive Morro Bay, CA 93442 805-772-4695 (h)

> Exhibit 6 A-3-MRB-11-001 194 of 363

From:	linda fidell [lfidell@csun.edu]	
Sent:	Thursday, January 12, 2012 9:56 AM	
То:	Madeline Cavalieri	
Subject:	thank you, from Morro Bay	

Dear Ms. Cavalieri,

Thank you for insisting that Morro Bay (and Cayucos) plan and construct a water treatment facility that produces reclaimed water. I attended a City Council meeting a couple of years ago in Morro Bay where it was clear that the mayor and many of the council members would do anything rather than what the coastal commission was asking for. I'm glad you held your grounds.

Linda Fidell 280 Andros Street Morro Bay, CA 93442

From: Monique and David [moniqueanddavid@sbcglobal.net]

Sent: Thursday, January 12, 2012 9:52 AM

To: Madeline Cavalieri

Subject: Thanks

Thank you for your work on the Morro Bay water treatment plant. I have been in Morro Bay for a long time. I have spoken out to get the most up to date system for our towns future. Unfortunately much of our population are older and have entrusted their power to a few good old boys. That refuse to listen to reason on this very important part of our towns future. So please know that there are many people in our town that are thankful for the work that the commission does. And are behind you and the rest of the staff of the CCC.

David Nelson Morro Bay

> Exhibit 6 A-3-MRB-11-001 196 of 363

From: Sent: To: Subject: dorothycutter [dorothycutter@sbcglobal.net] Thursday, January 12, 2012 9:26 AM Madeline Cavalieri MB/CSD WWTP

Hi! Thanks for your work on behalf of the Morro Bay citizens. We support your decisions and hope this project gets resolved soon so work can begin and less money is thrown away on consultants.

Dorothy Cutter 290 Cypress Ave. Morro Bay, Ca. 93442 805-772-7232 805-772-4386 fax http://www.dorothycutter.com send to: dorothycutter@sbcglobal.net RECEIVED

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CALIFORNIA

COASTAL COMMISSION

Madeline Cavalieri California Coastal Commission 725 Front Street, Suite 300 Santa Cruz,CA 95060

January 16, 2012

Dear Ms. Cavalieri,

Attached to this letter are two items – a communication to the Coastal Commissioners regarding the costs of the Morro Bay WWTP, and an article on Morro Bay's unreliable drinking water sources. I will send that article to the Commissioners at a later date, but am sharing it with you now due to associated water reclamation issues.

The article pretty much speaks for itself. However, one section of the article, "Questionable Morro Bay Backup Water Supply Provisions", only covers the surface issues. Some people think that there are ulterior motives associated with some City staff comments that are reported. Those motives have to do with the City's ongoing attempts to have Chorro Valley municipal well pumping restrictions lifted.

According to a local news story published last September, on Labor Day weekend, due to simultaneous State Water Project and Morro Bay desal plant equipment failures, the City nearly ran out of water. According to Dylan Wade, they nearly had to go to "Plan C" which would have involved using contaminated Chorro Valley well water from wells that are inactive per a CDP order.

While I have no doubt that there was a true water crisis, some people have told me that they think the story would never have been told in the press unless City staff were up to something. The suspicion is that they hoped that by "planting" the story, they could create support for their cause and convince authorities to lift pumping restrictions issued by the State Water Board in its Decision 1633. The alleged scheme was to show that the ability to use those wells is critical to maintain public health and safety.

As you know, Decision 1633 was issued because the City's over-pumping was seriously damaging the environment and impacting other area well water users, primarily those involved in agriculture. The Chorro Basin aquifer is, as you know, part of the National Estuary, and is subject to saltwater intrusion. In addition, Chorro Creek is a steelhead trout habitat.

If, indeed, there was an ulterior motive behind the story's appearance in the news, it seems to me that those responsible didn't think things through very well. Water reclamation and aquifer recharge, along with installation of a chlorination facility at the City's Ashurst well field could go a very long way toward solving both the well water quality AND quantity problems the City faces. Staff and officials have appeared to strongly resist both of these potential solutions.

Beyond that, there is significant evidence, although local officials refuse to acknowledge it, that the source of the well contamination is not agriculture, as the City's paid consultant claimed, but Roandoak, a ramshackle residential facility known to have several failed septic systems. It lies right in the middle of the City well field. On the left is a map showing the well locations and on the right, an aerial view of the area showing the location of Roandoak and the locations of the failed septic systems.



Exhibit 6 A-3-MRB-11-001 198 of 363

For whatever reason, the Roandoak facility is protected by the County. Many of us believe that if that facility's septic system issues were cleaned up, the City wells' nitrate contamination would go away. Yes, a City consultant claimed that the nitrates were from agriculture, but it has been alleged that his 'scientific method' left a great deal to be desired.

It has frequently been alleged that blaming the farmers for nitrate pollution in both of the City's aquifers is part of a scheme for getting more water for development. Drive the farmers out of business, and they will no longer be around to initiate complaints against City well over-pumping – like some of the complaints that resulted in SWRCB Decision 1633.

Regardless of whether the allegations of schemes and ulterior motives are true, I believe it is clear that wastewater reclamation is of critical importance in protecting both the environment and the health and safety of the residents of Morro Bay. We are counting on the CCC to help us make the vision of a sustainable community water supply a reality.

We have a great deal of information and evidence on the issues discussed herein. If the CCC would like more information on any of the points made in this letter, or in the article, please do not hesitate to contact me.

Sincerely,

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 199 of 363 Written by Linda Stedjee Sunday, 15 January 2012 13:57

Morro Bay's Unreliable Drinking Water Sources – New Concerns Emerge

The City of Morro Bay gets up to 90% of its drinking water from the State Water Project. State Water has proven to be an unreliable source due to supply limitations resulting from drought. In late 2009, the City received word that, due to drought conditions, it might receive only 5% of its expected 2010 allocation of water from the State system. However, drought is only part of the reason why Morro Bay's dependence on State water is of concern to some residents. The reliability of the State Water Project's water delivery infrastructure is an equally serious issue.

Other Morro Bay water sources include the Morro and Chorro Basin municipal wells and, occasionally, five seawater wells located along the Morro Bay harbor. The seawater and brackish Morro Basin well water are both processed at the desalination plant.

City wells cannot meet the City's water needs. The State has imposed pumping restrictions to prevent excessive drawdown of the aquifers, and water quality problems prevent usage of some of the wells. Desalination plant capacity and cost issues limit the amount of water processed at that facility.

State Water Project Infrastructure Vulnerable to Earthquakes

Concerns about the viability of State Water Program infrastructure have been documented by State Water Contractors (SWC), a non-profit association of 27 public agencies from Northern, Central and Southern California. Member agencies purchase water under contract from the California State Water Project.

According to the SWC web site, "The U.S. Geological Survey has warned of a 63% probability that a 6.7 magnitude or larger earthquake will hit in the next 30 years. An earthquake of that size has the power to not only devastate local communities, but wipe out a significant portion of the state's water supply for more than a year." And, "The water supply for 25 million people, businesses and farms is channeled by old and fragile levees built 100 years ago. A major earthquake in Northern California could trigger levees to break throughout the Delta, allowing saltwater to rush in from the San Francisco Bay contaminating a significant portion of our freshwater supply."

Such an event in the Delta would impact Morro Bay, which receives its State water deliveries through the Central Coast Water Authority (CCWA). The CCWA's 2011 Urban Water Management Plan describes the State Water Project's water delivery system as follows: "The keystone of the SWP is Lake Oroville, which conserves water from the Feather River watershed. It is the SWP's largest storage facility with a capacity of about 3.5 million acre feet (maf). Releases from Lake Oroville flow down the Feather River into the Sacramento River, which drains the northern portion of California's Central Valley. The Sacramento River flows into the Delta, comprised of 738,000 acres of land interlaced with channels that receive runoff from about 40% of the state's land area. The SWP and the Central Valley Project (CVP) rely on Delta channels as a conduit to move water from the Sacramento River inflow to the points of diversion in the south Delta."

"Thus, the Delta is actually part of the SWP conveyance system, making the Delta a key component in SWP deliveries. The significance of the Delta to SWP deliveries is described in more detail below."

"From the northern Delta, Barker Slough Pumping Plant diverts water for delivery to Napa and Solano counties through the North Bay Aqueduct. Near Byron in the southern Delta, the SWP diverts water into Clifton Court Forebay for delivery south of the Delta. Banks Pumping Plant lifts water from Clifton Court Forebay into the California Aqueduct, which channels the water to Bethany Reservoir. The water delivered to Bethany Reservoir from Banks Pumping Plant is either delivered into the South Bay Aqueduct for use in the San Francisco Bay Area or continues down the California Aqueduct to O'Neil Forebay, Gianelli Pumping-Generating Plant, and San Luis Reservoir."

Other State Water Project Infrastructure Issues

The potential impact of earthquakes is only one of the State Water Project infrastructure issues of concern to Morro Bay residents. A January 2011 California State Water Project notice to State Water Project contractors stated, "Due to continuing issues with the recruitment and retention of sufficiently skilled trades and crafts personnel, aging equipment, and unexpected equipment failures, DWR was not able to export over 100,000 acre-feet of additional water that was available for export since December. This has caused a delay in the filling of the San Luis Reservoir and will impact overall allocation of water in 2011."

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A State Water Project equipment failure very nearly left Morro Bay residents without a supply of clean, safe drinking water during the 2011 Labor Day weekend. As reported in Neil Farrell's September 2011 Bay News article, "Water Crisis Averted", "State Water Project officials averted a potentially serious water supply problem when its system unexpectedly went down due to mechanical failures in some of its massive pumps.

"Meanwhile, in an eerily similar set of occurrences, Morro Bay officials averted a potential local water shortage, after part of its backup water system proved unprepared. Combined, they could have made for a water shortage in the middle of Labor Day Weekend."

Questionable Morro Bay Backup Water Supply Provisions

One of the backup water systems discussed in Farrell's article is the City's desalination plant, which is capable of processing both seawater and brackish water from the City's Morro Basin well field. The plant, while effective in producing a significant amount of potable water, cannot replace State water deliveries when the State system is "down". The plant is very expensive to run and even when operating at full capacity can produce only a fraction of the water needed to meet the City's needs.

Farrell's Bay News article also described the potential use of the City's "Plan C", which would have evidently involved use of a group of Chorro Valley wells that are supposed to be in "inactive" status. Quoting City of Morro Bay staff member Dylan Wade, the article states, "Had state water not come back online when it did, the city would have been forced to turn to Plan C.

"By Monday, we would have added the Chorro water," said Wade. Chorro water is high in nitrates and problematic because it isn't treated and must be blended with treated water to reduce the overall nitrate levels. Doing that would have triggered the City's water emergency notification plan, which Wade said would have included a warning to residents that they were using the groundwater wells and to be careful of the nitrates, which are potentially harmful to babies, pregnant women and folks on dialysis."

The Chorro Basin wells contaminated with nitrates are in the City's Ashurst well field, and were placed in inactive status in 2008, by the California Department of Public health (CDPH). The CDPH took this action after it was discovered that at times, the City had been delivering potentially-harmful, untreated Ashurst well water to a group of water customers.

In a December 2, 2008 letter to Morro Bay's then-Public Services Director Bruce Ambo, CDPH official Kurt Souza stated, "The Department is requiring the City to cease the use of the Ashurst wells 9, 9A,. 10, 10A and 16. This letter serves as a notice to the City that the Department has changed the operational status of these wells to inactive.

"To reactivate these wells, the City must submit an application to the Department for their use. The application must include:

- A proposal for nitrate treatment for the Ashurst wells. The treatment (e.g. blending) must be provided before any customer connections.
- Plans of the Distribution system piping. The plans must clearly show service connections and the junction of water from Well 11A with water supplied from the Ashurst well field. The plans must also show the dedicated line to the Kings Tanks and service line returning from Kings Tanks to the east end of town.
- A chlorination plan for the Ashurst wells. The plan shall describe how all Ashurst wells are chlorinated prior to delivery to customers."
- City of Morro Bay staff are well aware that the Ashurst wells are not to be used, as evidenced by this statement in the City's 2010 Urban Water Management Plan: "...the City cannot use the Ashurst wells as a potable drinking water supply until the City provides blending, treatment, or nitrate levels in the basin subside."

The CDPH letter also stated, "The City must always consult the Department when 'Do Not Drink' notices or any other notices related to a change in the quality of drinking water, are served to customers". The CDPH issued that requirement as a result of an error in a notice that had been delivered to Chorro Valley water customers. The City's ability to consult with the CDPH, over a holiday weekend, and in the midst of a crisis appears questionable.

While a City contractor has claimed that nitrates in City wells are primarily from agriculture, some residents dispute that conclusion. They cite sewage from failed septic systems at a residential facility on Chorro Creek Road as the primary source of the nitrates in the local groundwater.

The City's "Plan C" for dealing with water shortage emergencies has concerned and baffled some residents. Use of the Ashurst wells would potentially endanger the health and safety of water customers, incur significant liability for any health impacts, and would violate a CDPH order, potentially triggering enforcement action against the City. Yet, City officials and staff appear willing to take the risks.

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Concerned residents have noted that including appropriate water reclamation processes and aguifer recharge as part of the WWTP replacement project could potentially resolve nitrate contamination issues.

Dilution from groundwater recharge is a basic attenuation process for nitrates. By using reclaimed wastewater to recharge the Chorro Basin aquifer, the City could potentially reduce nitrate concentrations enough to bring them within safe levels. Aquifer recharge would also increase the amount of well water available for use. In addition, installation of additional chlorination facilities at the Ashurst well field would address the remaining CDPH concerns, and the Ashurst wells could potentially be put back into active status, making "Plan C" a viable, safe measure for use in times of water shortage.

Yet, City officials and staff have resisted both water reclamation recommended by residents and the CCC, and installation of the chlorination devices recommended by the CDPH. Reasons for this resistance are unclear. It has been alleged that unwillingness to pursue water reclamation is connected with planned development of power plant property, and that refusal to install the chlorination devices may be tied to concerns that this action would require a new Coastal Development Permit (CDP). Some residents have guestioned whether the City has CDPs for the Ashurst wells. Application for a CDP for the chlorination devices could potentially focus CCC attention on well permit status.

Wastewater Reclamation - a Potential Step Toward Water Self-Sufficiency

For several years, Morro Bay residents and Coastal Commission staff have urged City officials to make water reclamation a priority for the Morro Bay-Cayucos Wastewater Treatment Plant (WWTP) replacement project. The City and its WWTP partner, the Cayucos Sanitary District (CSD), have appeared to dismiss the idea. This situation could change if the California Coastal Commission (CCC) has its way.

In the recent rejection of the alternative WWTP site study conducted by Dudek consultants, CCC staff asked for a detailed exploration of a number of issues related to water reclamation. Local observers believe that the CCC's actions make it clear that significant water reclamation will be a critical requirement that will be imposed on the WWTP replacement project.

If that is the case, the City of Morro Bay will, according to some residents, be taking a major step toward water supply independence. By recharging the aquifers that supply City wells, the City has the opportunity to reduce its dependence on unreliable State Water Project deliveries, helping to ensure that the town will have sufficient water to meet basic needs in spite of what happens to the State Water Project system.

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This article belongs to category: Local

Exhibit 6 A-3-MRB-11-001 1/20/2201 363:49 AM

Dear California Coastal Commissioners

I am writing in regard to the Morro Bay – Cayucos wastewater treatment plant (WWTP) project. A considerable amount of taxpayer money spent on the project appears to have been completely wasted. I believe, as do many others, that we must avoid throwing good money after bad, and must put the project on the "right track" now. It may be necessary to scrap most, if not all the work done to date and start the project over to ensure that it adheres to the LCP, the Coastal Act, and common sense principals of project management and planning for future reclaimed water needs.

As discussed in the attached Rock of the Coast article, "The Morro Bay – Cayucos Wastewater Treatment Plant Project – Where Did All the Money go?", traceable project costs, as of December 31, 2011, total over \$2,260,347.56. The article provides details of the known costs.

Actual costs are clearly much higher. The Cayucos Sanitary District has not tracked costs associated with staff labor. The City of Morro Bay did not track its staff labor costs for the project prior to 2007, and the Morro Bay City Attorney did not track any of the costs for his project legal work. Based on known costs, I estimate that at least an additional \$300,000 (a conservative figure) has been spent, taking the total project cost as of December 31 to more than \$2.5 million.

What we have to show for that considerable expenditure of taxpayer dollars is, according to many residents, a mismanaged project in deep trouble. All of the work done thus far has focused on placing the facility on a site that lies in a flood plain, a tsunami zone, a significant scenic, visitor-serving area, and a sacred Native American site with known to contain significant archaeological artifacts and many burials. Despite the City's dire water supply situation, no meaningful plans for water reclamation are included in the project as currently defined.

Project Failures

The waste of taxpayer money on this project appears to be primarily due to bad decisions and bad management. The City and the CSD failed to appropriately act upon advice received from your staff and from residents, and to adhere to the City's Local Coastal Plan and the Coastal Act. Failure to adhere to basic project management principles and failure to plan for water reclamation to meet current and future City of Morro Bay water needs have also resulted in significant waste.

Initially, it had been thought that the existing facility could be refurbished. A considerable amount of money was spent on a Facility Master Plan based upon that assumption. When it was learned that the current WWTP was in the flood path, project staff realized that a new plant would have to be built. At that point, the City and the CSD had a chance to move the plant to a more suitable location, but they chose not to, and decided to build the new plant adjacent to the old one.

Despite the fact that the project had clearly turned from an upgrade to a replacement, they continued to refer to the project as an upgrade. This was allegedly done to avoid the more stringent environmental rules that apply to new construction.

The City of Morro Bay is known to have serious water supply problems, yet the City and CSD ignored CCC and resident recommendations regarding wastewater reclamation. In December, 2008, CCC staff member Mike Watson told the City of Morro Bay's Public Services Director that "The EIR should identify a suite of potential beneficial uses for this treated water along with any additional infrastructure and processes that would be needed to reclaim this potential source of water relative to various alternative beneficial uses." His recommendation, along with all the others, evidently fell on deaf ears.

The City and CSD updated the faulty Facility Master Plan (twice), at considerable taxpayer expense, and began design of the new WWTP before the Draft Environmental Impact Report (DEIR) was complete. When the DEIR was found seriously deficient by the Morro Bay Planning Commission and by Coastal Commission staff, the City and the CSD chose to certify the faulty DEIR as final, and hired a lobbyist in an effort to convince you to allow them to proceed.

Design work continued after CCC staff's evaluation of the DEIR was received, in spite of the numerous problems that had been pointed out. An additional \$100,000 had been spent on the site-specific design before design work was suspended.

When the CCC took over authority for permitting the project, a required alternative sites study was undertaken. However, some have alleged that the \$350,000 process was merely a "dog and pony show", designed to give the appearance of compliance, and done with the intention of making sure the Atascadero Road site came out on top. Residents identified and pointed out numerous flaws in the site screening work done by Dudek consultants. Yet, the site preferred by City and CSD officials and staff remained number one in the consultants' ratings, despite its major deficiencies.

Now, as expected, your staff has asked for considerable additional work to be done, and more information on all of the sites that were originally under consideration. Many project tasks will now have to be done over at taxpayer expense because, in the opinion of residents, they were not done right the first time. Exhibit 6

Exhibit 6 A-3-MRB-11-001 203 of 363

The Future of the Project

I hope, as do many others, that the CCC will not allow this project to proceed as defined, and will ensure that permit requirements force the City and the CSD to proceed in the right direction. Starting this project over, and doing things right this time will, in the opinion of many of us, cost taxpayers far less in the long run.

Putting the facility in the right location will help prevent environmental disaster, and effective water reclamation will go a long way toward easing the City's water supply problems. It will also allow the City to realize the benefits of more appropriate usage of the Atascadero Road site, which is ideal for visitor-serving facilities.

I believe that the continued involvement and close attention of the CCC will be necessary to ensure that things are done correctly, and to prevent this project from being a far more costly disaster than it already is. It certainly appears that, without your close scrutiny and continued intervention, those in charge of the project cannot and/or will not do what is right.

Thank you, as always, for your attention to the concerns of Morro Bay residents.

Sincerely,

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442

cc: Madeline Cavalieri
Written by Linda Stedjee Friday, 06 January 2012 12:23

The Morro Bay–Cayucos Wastewater Treatment Plant Project – Where Did All the Money Go?

As of December 31, 2011, the Morro Bay-Cayucos wastewater treatment plant (WWTP) replacement project had cost Morro Bay and Cayucos taxpayers over \$2,260,347.56. This figure includes \$1,820,802.57 for consulting work, \$222,684.77 for City of Morro Bay staff labor, \$205,713 for Cayucos Sanitary District (CSD) legal review work, and \$11,147.22 for miscellaneous expenses. Figures were derived from data contained in City of Morro Bay financial reports, staff reports, contracts, and invoices, and from data provided to The Rock by the CSD. Missing from the total are significant project expenses that were not tracked and recorded. Those include the costs of CSD staff labor, City of Morro Bay staff labor prior to 2006, and City of Morro Bay legal work.

Some residents suggest that at least \$1 million of the money spent on the project has been wasted. The total, however, may be much higher.

The project has, to date, focused on locating the new plant on Atascadero Road. Initially, it was thought that the existing plant could be upgraded; it was then decided that, due to flood concerns, a new plant would be built on land adjacent to the current plant.

However, the Atascadero Road site, long favored by City of Morro Bay and CSD officials and staff, has been found to violate a number of provisions in the City of Morro Bay's Local Coastal Plan (LCP). It lies in a flood plain and a tsunami zone, over a major archaeological site, and in a scenic, visitor-serving area. If the new plant must be built elsewhere, it appears that far more than \$1 million will have been wasted because facility plans, design work, and environmental reviews have focused on the favored site.

Betty Winholtz, a Morro Bay community leader who served eight years on the Morro Bay City Council, found herself in the voting minority on some WWTP project decisions and has criticized expenditures approved by a Council majority that allegedly failed to spend taxpayer dollars wisely. "Let's be generous," says Winholtz. "Even if half of the amount spent so far by the City was for legitimate needs, at least \$1 million appears to have been completely wasted. That money could have been spent on replacing cracked/deteriorated collection system pipes, or that \$1 million could have been taken off the top of the cost of the new plant, saving money for the ratepayers. The City Council I served on was not frugal, and the current Council is even worse."

City and CSD staff and officials have long turned a deaf ear to most resident and CCC staff input on the project. Some residents suggest that much of the alleged waste could have been avoided if City and CSD officials and staff had heeded warnings, advice and recommendations regarding site problems, use of outmoded technology, the importance of water reclamation, alleged conflicts of interest in regard to contractors, alleged irregularities regarding contractor selection, and project management methodology errors.

Among the most significant examples of waste cited by residents are the \$377,317.90 environmental impact report (EIR) and the \$350,000 alternative site study, both of which failed to address clearly-stated resident and CCC concerns and recommendations. Both studies have been essentially rejected by the Coastal Commission for serious flaws and omissions.

Project Management Issues

Some residents allege that a key factor in the waste of taxpayer money on the WWTP project is poor project management. They allege that the City and the CSD rushed the project without an adequate plan in place and failed to adhere to basic, standard project management principles.

Residents with expertise in engineering and project management have noted that the City and the CSD did not follow the standard practice of evaluating alternative sites and performing environmental reviews before proceeding with any site-specific design work. Instead, they began with development of a Facility Master Plan for the Atascadero Road site favored by the majority City and CSD officials and staff. Hundreds of thousands of dollars were spent planning and designing a plant for the Atascadero Road location before an environmental assessment of the site, and of alternative sites, was complete. "This is backwards," says one local engineer. "The EIR should have been completed first and should have included alternative sites. The project was not clearly scoped out before the money was spent."

Although it was well known that the Atascadero Road site lies in a flood zone, the Facility Master Plan (FMP) for the site was

Exhibit 6 A-3-MRB-11-001 205778636:42 AM drafted before flood hazards were fully assessed. That the consultants knew of the flood risk is illustrated by this comment quoted from the FMP document: "The MBCSD WWTP experiences both localized drainage problems and larger flooding problems. Initial findings have shown that the current site may be flooded by as much as six feet."

Only after the FMP was complete was a flood hazard study done. The first version of the FMP was based on the assumption that most of the existing WWTP facilities could be upgraded in place. The original FMP recommended refurbishing much of the existing plant, as noted in this statement from the document: "Most of the existing facilities appear to be in good structural condition and with some rehabilitation and upgrades should have the capacity to serve the MBCSD WWTP for the projected build-out flow conditions."

When flood hazard study was complete, it was determined that the existing WWTP facility was directly in the flood path, and would have to be demolished and replaced with a new one. It was suggested that a new plant could be built on adjacent land. Although the project changed at that point, from a facility upgrade to a facility replacement, no significant attempt was made to consider alternative sites for the new WWTP.

Subsequently, two major FMP amendments were issued to correct the original at taxpayer expense. The first, done by the same consultant who had done the original FMP, presented plans for a new facility adjacent to the old one. The second, done by a different consultant, made numerous additional changes to the work of the first consultant, including capacity-related modifications, structure relocation, facility consolidation, and technology modifications.

Several hundred thousand dollars were then spent on a plant design based on the updated FMP, which focused on the Atascadero Road site. This was done although the EIR for the site had still not been completed and reviewed.

Based on a recommendation made in the flood hazard study, a FEMA flood map revision for the Atascadero Road site was requested and completed. There are concerns that the map may not be reliable. Both natural forces and human activity have the potential to significantly alter flood patterns, and some residents believe that no flood map of the area can be considered useful in the long term.

When the draft EIR (DEIR) was finally produced, both the City of Morro Bay Planning Commission and California Coastal Commission (CCC) staff found numerous problems with the project and with the site. City of Morro Bay Mayor Bill Yates reacted to the Planning Commission's findings by threatening to fire all of the Commissioners. However, the Commission's findings were confirmed by those of CCC staff, who also determined that the project and the site, as specified, would violate numerous provisions of the City of Morro Bay Local Coastal Plan (LCP) and the California Coastal Act.

CCC staff findings are summarized in this statement, made in their 12-page EIR review document: "Thank you for the opportunity to comment on this important, major public improvement project. Given the significant issues raised by the proposed project and the range of issues it raises with the certified LCP and the Coastal Act, including the location of this major new infrastructure project in an extremely hazardous and sensitive area, the reduced wastewater treatment capacity, and the lack of a significant water reclamation program, we respectfully request that the project be re-envisioned in terms of alternative siting and design, and that the DEIR be revised and recirculated to address our concerns, including with respect to a more robust identification of project alternatives that can better address the LCP and the Coastal Act."

Rather than address the CCC staff's concerns and advice before proceeding any further, the City and the CSD chose to certify the rejected DEIR as their final EIR. They hired a lobbyist to attempt to convince the CCC to accept the EIR and to allow the project to proceed as defined. They then forged ahead with the project, allowing design consultant MWH to continue its work designing a plant for the Atascadero Road site.

CCC staff's 12-page letter on the DEIR was received November 12, 2010. A September 1, 2011 report by project manager Dennis Delzeit indicates that, "MWH work was suspended on 11/19/10 except for completion of surveying, geotechnical report, floor plan layout and support at the PC and CC meetings in support of the permits." All of those tasks appear to be site-specific. The cost for MWH design services performed after the CCC's letter was received total over \$100,000.

Having reviewed their staff's findings with regard to the DEIR, the Coastal Commissioners voted to take over permitting authority for the WWTP. At that point, with no other choice, the City and the District were forced to deal with CCC staff concerns, including the need for a thorough alternate site review, and an evaluation of water reclamation opportunities.

Dudek Consulting was hired to do an alternative site study, but residents who reviewed the site screening process and results found numerous problems, and communicated their concerns to the City, the CSD and the CCC. An example of the problems identified by concerned residents is the fact that Dudek selectively ignored its own definition of a "fatal flaw". The consultants

Exhibit 6 A-3-MRB-11-001 2067/203636:42 AM allowed the Atascadero site to remain in the running, despite the fact that it lies in a 100-year flood plain. Yet, a nearby site was eliminated due to flood plain issues.

Despite the numerous site screening-process problems identified and communicated to the City, the CSD, and the consultants, the favored Atascadero Road site remained on top in the consultants' ratings. After receiving Dudek's fine screening report, CCC staff identified a considerable amount of additional information that would be needed for the various sites originally under consideration. Given that the information requested covers sites that Dudek's analysis had eliminated from the running, it appears that Dudek's consultants have been sent "back to the drawing board", and that much of the \$350,000 spent on their original effort was wasted.

Over the course of the WWTP project, CCC staff members have offered advice and recommendations, and have made it clear that they were available to provide assistance. However, it appears that they were essentially ignored by WWTP project management staff. Even after the CCC took over permitting authority for the project, WWTP project staff and their consultants appear to have continued their alleged attempt to sidestep CCC staff concerns and recommendations. Some residents believe that this is evidenced by alternative site study problems, and by the failure to adequately explore water reclamation opportunities.

Whether the CCC will allow the new WWTP to be built at the Atascadero site is currently unknown. A decision may be made in April, if the new information to be provided to CCC staff is deemed sufficient to support meaningful analysis by the Coastal Commissioners.

The Numbers

Well over \$2,260,347.56 has thus far been spent on the WWTP project. As of December 20, 2011, CSD customers had paid \$599,867. The remainder was paid by the residents of Morro Bay. Actual costs to taxpayers are significantly higher than the \$2,260,347.56 total, but cannot be calculated with accuracy due to a lack of data.

Some staff labor costs for the project were not tracked. CSD staff labor cost information is missing because, according to Bill Callahan, CSD District Manager, "We do not track CSD staff time for accounting purposes on this project." The City of Morro Bay has no accounting data on WWTP staff labor costs for years before 2007. According to City staff, prior to 2007, all labor on the project was charged to WWTP operations and cannot be separated out from labor costs associated with running the existing plant.

Morro Bay's WWTP project legal costs are also unavailable, as the Morro Bay City Attorney's office does not track staff time to any specific project. According to City Attorney Rob Schultz, "My time as City Attorney is not tracked unless there will be reimbursement." And, "Without tracking of my time, there is no way of knowing the legal services associated with the WWTP project. These costs have been subsumed into my salary as the City Attorney."

However, according to a statement in the 2011/2012 Morro Bay City budget, the City Attorney's office charges 60% of its personnel services to the Water, Sewer and Harbor Enterprise Funds. Responding to The Rock's inquiry regarding these charges, Schultz stated that, "Since 2009/2010, 20% of the City Attorney Department personnel cost have been allocated to each enterprise fund based upon the estimated staff time spent working and providing legal assistance to each fund." In fiscal year (fy) 2009/2010, the City Attorney's office charged \$26,671 to the Sewer Fund. (This figure covers the second half of the year only.) In fy 2010/2011, \$53,341 was charged to the Fund, and in fy 2011/2012, \$53,247 has been charged, for a total of \$133,259.

Given that the City Attorney's office would be expected to have minimal involvement in the day-to-day operation of the current WWTP and sewer system, most of the \$133,259 charged to the Sewer Fund over the last 2 ½ years may have been spent on the WWTP project. If the City's WWTP project legal costs have remained fairly constant over time, the amount spent over the past five years could be over \$260,000. This amount is somewhat higher than, but comparable to the CSD's reported project legal cost of \$205,713.

Work done and overseen by consultants is the primary WWTP project expense. Through review of invoices, staff reports and contracts, The Rock has determined the amounts of a number of the consulting fees paid by City and CSD taxpayers. According to data contained in the documents reviewed, the amount spent for the work of consultants is at least \$1,741,576.57. The original FMP, done by Carollo Engineers, cost taxpayers \$218,996. Another \$21,000 was spent on a corrosion study that evaluated the condition of existing plant facilities. The WWTP Draft Revenue Program contract with Carollo Engineers was for \$85,000. A corporate yard space needs assessment for the Atascadero Road site, done by RRM Designs, cost \$49,740. The DEIR, done by Environmental Science Associates (ESA), cost \$377,317.90. The first amendment

Exhibit 6 A-3-MRB-11-001 207/20365:42 AM of the FMP, done by Carollo Engineers, appears (based on invoices) to have cost about \$33,000. Work on the second FMP amendment, plus additional design work, both done by MWH, cost \$469,858.82. How much MWH billed for the FMP amendment versus other design work cannot be determined from the invoices. The lobbyist, McCabe & Co. cost \$42,477.85. The FEMA map revision, done by Wallace Group, cost \$23,380 for consulting work, plus \$5,300 paid directly to FEMA. Project Management by Dennis Delzeit and Wallace Group has, as of December 2, 2011, cost \$125,506.09. The original Dudek contract totaled \$350,000.

According to Morro Bay Finance Director Susan Slayton, the City "bills Cayucos based on quarterly flow for operational expenses, and capital, excluding labor, at 28%." CSD data, as of December 20, 2011, indicates that its project consulting costs were as follows: Upgrade Design – MWH, \$134,987, Upgrade Design Contingency, \$3,562, Facilities Master Plan – Carollo, \$78,310, Project Manager – Delzeit, 11,940, Draft Revenue Prog, \$13,000, Environmental Review – ESA, \$64,648, California Coastal Commission Appeal, \$8,384, AECOM USA Inc. WWTP (Review), \$77,461, Legal WWTP (Review), \$205,713, Quad Knopf Engineers, \$1,765, and Miscellaneous Costs, \$97.

Some consulting costs reported by the CSD do not appear to have been billed by the City, and the CSD did not pay a share of every project consulting expense that the City incurred. The CSD Board declined to cover any of the cost of the corporate yard space needs assessment for the Atascadero Road, having stated that they did not consider the work necessary.

In addition to the consulting cost information obtained from the City, cost data provided by the CSD includes \$77,461 for "AECOM USA Inc., and \$1,765 for Quad Knopf Engineers. This brings the total known WWTP project cost for consultants to \$1,820.802.57.

Although lower than the amount spent on consultant services, the cost of the labor of Morro Bay staff working on the WWTP is significant. According to City accounting reports, the total was \$222,684.77, covering "labor costs, applied", and "employer paid benefits. Of that, \$77,673.70 was spent on the WWTP CCC appeal process, \$78,867.19 was spent on WWTP upgrade design, \$45,802.09 was spent on the WWTP EIR/permitting process, \$2,229.04 went to the Facility Master Plan and \$18,112.75 to the WWTP Revenue Program.

Other WWTP project costs included in Morro Bay financial reports include \$313.08 for "meetings and conferences", \$8,288.25 for "licenses and permits". "Postage" adds another \$110.70, \$351.22 was charged to "Fuel Oil & Lubricants", and \$1,986.97 to "machinery/equip/supplies". These additional expenses total \$11,050.22. The CSD listed \$97 in "miscellaneous costs", bringing the total for these lower-cost items to \$11,147.22.

What Lies Ahead?

The CCC has told the City and the CSD that much more information will be required than has been provided in the Dudek consultants' alternative site study. Comments made by CCC staff appear to indicate that, like the DEIR, the study was found wanting in a number of ways. More consulting fees will have to be paid to provide the information that some residents say should have been provided in the original rough and fine screening site studies.

CCC staff comments also appear to indicate that the staff is no more enthusiastic about the Atascadero Road site now than when their 12-page report on the DEIR was issued. This could mean that the CCC will require that the new WWTP be built elsewhere, on a site where the facility will be safe from major floods and tsunamis, and will not have serious negative impacts on major archaeological sites and scenic, visitor-serving areas. Because most of the work so far, including plans, design, and environmental studies, has been focused on the Atascadero Road site, in this scenario, most of taxpayer money spent so far will have been wasted.

Some residents say that, had the City and the CSD listened to the CCC and the residents from the beginning, the waste could have been avoided, and the project would now be well down the road toward completion of a modern, efficient facility. That facility, they say, would be located out of harm's way, designed using the latest technology, and capable of providing sufficient reclaimed water to significantly improve City of Morro Bay water supplies.

As things stand today, it appears that the project may have thus far traveled a long road to nowhere, with taxpayers picking up the tab.

#

This article belongs to category: Local

DCITIC

January 24, 2012

California Coastal Commission 725 Front Street, Suite 300 Santa Cruz, CA 95060 JAN 2 7 2012

RECEIVED

CALIFORNIA COASTAL COMMISSION CENTRAL COAST AREA

RE: The City of Morro Bay plans to cut off municipal water to a group of water customers, forcing the customers to use new, private domestic wells. The Burton property was issued building permit and a Coastal Development Permit based on the City of Morro Bay's issuance of utility water. Additional wells would draw considerable amounts of water from the already-stressed Chorro Basin aquifer, creating hazards for the customers, and for sensitive Coastal Zone ecosystems.

To Whom It May Concern:

This letter constitutes a complaint against the City of Morro Bay and the County of San Luis Obispo and LAFCO. I request your intervention and action regarding the matters described herein. Specifically, I request that you investigate, issue a formal opinion and, if you deem it appropriate, take enforcement actions as necessary.

Complaint Summary

The City of Morro Bay plans to cut off municipal water service to its Chorro Valley water customers. This action would threaten the health and property of those customers, and of the Chorro Valley aquifer, which is part of extremely sensitive ecosystems located in the Coastal Zone, and the Morro Bay National Estuary.

The City intends to remove 11 water connections and to drill 11 new domestic wells for the affected customers. The wells would draw a considerable amount of water from the Chorro Valley aquifer, and the required water treatment devices would have a 3-to -1 waste output straining the septics which are already located in high ground water and flood zone.

Overuse of City wells in the area already threatens the aquifer (See exhibit A attached aquifer diagram). The new domestic wells would increase the drawdown of the aquifer; significantly increase the likelihood of salt water and septic intrusion, and posing serious risks to sensitive ecosystems. Previous damage is documented in SWRCB case #1633 July 20. 1995. The increased amount of water taken from the aquifer could impact surface stream flow in Chorro Creek. The creek is habitat for many species, including steelhead trout.

In addition, waste from the water treatment devices would threaten the quality of the water in the aquifer. It would stress users' septic systems. The Burton property is under an acre, landlocked and has no area of repair should the septic fail, thus potentially further damaging the environment.

Another concern is that use of domestic wells would jeopardize the health and safety of the Chorro Valley water customers who live near a known-but-unregulated source of sewage pollution, the Roandoak facility. Roandoak has several failed leach fields and a dump station directly over the aquifer. It lies in very close proximity to the areas where the new wells would be drilled. (This matter is currently in enforcement with Nancy Cave CCC).

Lack of a reliable source of clean domestic water would also drastically reduce property values for the affected water customers. Already, the City's actions have so severely impacted our property that I have been advised to file an "inverse condemnation lawsuit". Morro Bay City Attorney Robert Schultz was made aware that we cannot sell or refinance our property because of the City's controversial plans and actions, but the City appears unwilling to change course.

The City of Morro Bay has already taken action against one property owner and refuses to turn on the locked meter at a residence that was bought in a foreclosure sale. That family currently has no water supply.

A-3-MRB-11-001 209 of 363 property, like mine, is under an acre and, due to requirements that wells and septic systems be kept a minimum distance apart, they cannot legally have a well. My nonconforming lot is not sufficient and has no legal area for expansion or septic repair if the neighbors drilled a new well. At the time of permitting, (building and CDP), the County and City and agreed that the utility water authorization made my property legal and whole (1995).

As Chorro Valley water customers, we have city addresses but we are located within the County's jurisdiction. Regardless of the boundaries, the City of Morro Bay has supplied and charged for water services (well and state water) for over 50 years and to date, defines this area as "Morro Bay's Service area" (see Exhibit B - emergency petition to SWRCB).

The City of Morro Bay has several large municipal wells in the area. At present, the City uses one of them, well 11A, and takes a significant amount of water from the aquifer to supplement its municipal water supply. It should be noted that Morro Bay has historically and consistently is currently violating <u>SWRCB Decision #1633</u> (http://www.swrcb.ca.gov/waterrights/board_decisions/adopted_orders/decisions/d1600_d1649/wrd1633.pdf) in regards to the impacts to the aquifer, creek and steelhead habitat from the City's over pumping. Despite restrictions imposed by Decision #1633, the City of Morro Bay is still in violation, even though enforcement action is pending with Laura Lavallee, Senior WRCE Ms. Lavallee is reachable at Lavallee@waterboards.ca.gov.

Chorro Valley residents' attempts to dissuade the City from cutting off their municipal water supplies have failed. We have exhausted all local resources and remedies. We have had meetings with staff of the City of Morro Bay and County San Luis Obispo agencies, and with Supervisor Bruce Gibson. A letter from a local attorney (Exhibit C, attached) describes one of the meetings. Our efforts have been only met with false statements, hostility, and finger pointing.

Attached documents will show the local agencies – County of San Luis Obispo, City of Morro Bay, and the San Luis Obispo Local Agency Formation Commission – are jointly involved in our water utilities ("Sphere of Influence") via compliance and permitting within the Coastal Zone.

No one will help or take any responsibility. The City claims the County is responsible. The County claims the City is responsible. LAFCO just doesn't care. However, in a response to recent public records requests, I received communications that clearly show involvement all of the parties who claim they are not involved or responsible. I believe the documented evidence clearly shows that they are.

Yet, they continue to refuse to address my concerns. A local Health Department official suggested I ask the CCC for help, stating that he would appreciate your involvement

Background

The City of Morro Bay has supplied municipal water to Chorro Valley residents for many years. There were no problems until early 2010. At that time, Chorro Valley water customers discovered that, at times, they were receiving untreated Chorro Basin well water instead of the normal deliveries of safe, chlorinated State water.

This was occurring because there is only one water line between the Chorro Valley wells and the City water tank. When the wells are pumping, that line carries untreated well water to the blending tank, thus making it impossible to send blended water – in the other direction – to Chorro Valley water customers.

Chorro Valley residents were never warned of this situation, and discovered it by accident. Concerns over the safety of the untreated water arose due to the serious risks posed by a nearby source of leaking sewage, by frequent odors of sewage from existing domestic, wells used for agriculture, and by past health problems that might have been caused by the delivery of the untreated well water. Concerned residents contacted the California Department of Public Health (CDPH) Drinking Water Division.

Exhibit 6 A-3-MRB-11-001 210 of 363 Kurt Souza, of the CDPH, intervened immediately, and ordered the City of Morro Bay to immediately stop using all but one of its Chorro Valley wells. Souza recommended a water treatment system to be constructed in the vicinity of those wells. Implementation of that recommendation would have eliminated the risks to Chorro Valley water customers, and allowed the City to resume use of its wells. (See Attached Souza Letter well shut down Exhibit D)

After the City was ordered to stop delivering contaminated water to our neighborhood and ordered to resume delivery of usual State water, City officials decided to discontinue our utility water because they didn't want to spend the money for a pipeline to bring back treated water from the City's central treatment facility, or put a treatment facility out here in Chorro Valley.

City officials admit that the City is at fault for the problem. Yet, while threatening to cut off our water, they also clearly expressed their intent to continue using their Chorro Valley municipal wells. They intended to continue profiting by providing the well water to the City of Morro Bay from the pumping of the aquifer directly below our land while refusing us municipal water.

I have a DVD of the meeting 09/28/09 where the Mayor and City Council admitted to issuing the water meters and connection. They state that they needed to "make us whole," and admitted fault. Unfortunately, they subsequently backed out of any offer discussed. To date, current mayor William Yates has not responded to my e-mails. I have spent lots of money on attorney fees for useless meetings with City officials and staff.

The City has already convinced one customer to sign away all future rights to municipal water. Now, City officials say that their only offer in negotiations is to drill new domestic wells on the remaining properties and install cleaning units. County HD official Rich Lechtinfels can verify a recent well application with Roandoak. Mr. Lechtinfels requested a hydrological study prior to approval. In return, all property owners will also be required to sign away any future rights to Morro Bay municipal water.

Burton /Chorro Valley Water Customers' Legal Issues and Evidence

To illustrate some of the legal issues, I will provide you with information on my personal situation. Other Chorro Valley customers' situations vary. Other customers can cite old agreements for water, meters in place, and a history of past practice.

We purchased our home at 459 Chorro Creek Road, Morro Bay, CA (APN 073-131-018) in 2004. The listing and title report (Exhibit E, attached) state that the property is served with Morro Bay utility water. Note: When reviewing the exhibits, please be aware address or my property was changed at the time we purchased it to 459 Chorro Creek Road. The old address was 565 Chorro Creek Road. The APN is the same.

We changed water service to our name and have paid our water bill ever since. At no time were we informed by the City of Morro Bay of any problems or issues. My property was permitted, building and Coastal Development permit by the County of San Luis Obispo in 1995. My property is less than an acre and land locked. Our address is City of Morro Bay but we are located within the County limits.

Morro Bay City Attorney Rob Schultz has denied that the City has a contractual obligation to supply us with treated water because we are outside City limits. Initially, he denied that there was any documented evidence of the City's obligations. When I located the actual City water authorization to my home, the City attorney stated the City didn't have them and they "must have burned in a fire".

After much research, which included tracking down previous owners of our property, I retrieved City and County documents that prove the County permitted my home based on the City's written authorization (Exhibits F, G attached). This authorization was dated at the time of construction of my home in 1995. In Exhibit 6

response to County concerns, the City guaranteed the property would be supplied with City water. This agreement was required before the County would issue the CDP and building permit.

I truly feel that the County's letter and City's response ensuring utility water was a contract not only made with me but the County and Coastal Commission as well. The County permit was issued based on those facts and therefore the utility water should remain the responsibility of the City of Morro Bay and the County of San Luis Obispo. I am hoping the CCC has something to protect properties in your jurisdiction when a significant factor of a building permit and CDP is threatened to be removed

In addition, I located an old property lease between my property, Roandoak and the City of Morro Bay. I was never made aware of the existence of that lease, which had neither been disclosed nor recorded by the City of Morro Bay. The lease states that, in addition to the municipal water, the City agreed to supply my property with 500,000 gallons of additional water **per month** (Exhibit H). The City made no attempt to inform me of my rights under this lease. However, the City honored the lease with the other property. There are now two documented water agreements. There is also no Coastal Development Permit for that lease or for the municipal well.

It was recently discovery that the City intends to annex the area where many of the Chorro Valley water customers' properties are located. In a recent e-mail, Morro Bay City Attorney Rob Schultz admitted the City intends to annex **AFTER** all our connection is cut off. I do not fully understand the legal issues behind this, but it appears to be aimed at avoiding some kind of legal requirements. Schultz has also indicated that he will "wait us out." (Exhibit I, email annex Schultz)

This area was once in the Sphere of Influence at the time of the meters and issuance of utility water and has since been removed by LAFCO. According to LAFCO David Church, his agency is not responsible. This is contrary to GOVERNMENT CODE SECTION 56425-56434

In the staff minutes from a meeting detailing the City's attempted annexation, they list the water connections as health and safety reasons for annexation (see attached staff report, Exhibit J). The City didn't follow through with the application after receiving State Health Dept. Kurt Souza's order to stop delivering untreated well water to our homes, and to shut down the Ashurst well field until that issue was resolved.

The City's threat to cut off our water supply in exchange for an onsite domestic well is not a viable solution or reasonable offer. To do so would not be feasible or legal. The issues fall within your jurisdiction, and your opinions on this matter would be much appreciated. Here are the critical issues:

- The City's ongoing; 14 years of non-compliance with SWRQCB Decision #1633 has made our groundwater unstable and unreliable. I fear additional septic and seawater intrusion due to City well usage, and due to the additional water withdrawals that would result from 11 new domestic wells in the area. It's a health and safety issue, and one that would worsen once the City starts using its currently-inactive Ashurst municipal wells.
- Our groundwater is contaminated with nitrates and coliform. Our property is surrounded by agricultural
 operations and illegal septic systems (see Roandoak facility, which is currently in enforcement with
 CCC Nancy Cave and Sharif Traylor) which are a potential source of the contamination. The
 contamination problems are verified by a May, 2009 Cleath & Associates groundwater nitrate study, and
 by well testing results sent to CDPH. This is another health and safety issue
- Because our property is under an acre, per the County Code, we cannot have a domestic well. The attached documents include the County's January 31, 1995 letter that addresses the under-an-acre issue and the water source needed for issuance of a building permit. The City responded with a letter of

Exhibit 6 A-3-MRB-11-001 212 of 363 authorization, fee schedule, a meter and request for a Special Encroachment permit. The County building permit was issued based on the City's guarantee of State water.

Per County health department staff member Rich Lechtinfels, there is no location on our property far enough from the septic systems to permit a domestic water well – even if there were locations that would be far enough from existing septics, leach lines, the recently permitted "Roandoak's RV dump station", and corralled grazing cattle. Such a location would encroach in areas that may be needed in the future for expanding failed septics, both on our property and our neighbors' property. (Exhibit K letter form HD) A cleaning unit has waste outputs that will impact our septic, which is already located in an area of high ground water and flooding. County Health has same concerns, and has since requested a new hydrologist report be done.

To address County regulation barring domestic wells on less than one acre, the City has suggested that the size of our property could be increased to an acre by offering us a portion of the easement road that serves our property, and the neighboring property. We don't believe this is a viable solution. That would only increase the lot size on paper, but will do nothing to address the serious health concern about locating a domestic well too close to a septic, leach line, and a potential future septic expansion area.

• The 3 parts brine waste to 1 part clean water output from a cleaning unit from a well could adversely impact our septic, and potentially violate the new groundwater rules. The Regional Water Quality Control Board has stated that the waste from a domestic well cleaning unit will fall under their permitting under the new "groundwater rules" for waste generated.

Past and Ongoing City of Morro Bay Damage to the Chorro Basin Aquifer

The City's failure to adhere to restrictions designed to protect the Chorro Basin aquifer goes back many years. In 1997, the SWRCB issued Decision #1633, which restricts the City to using its Chorro Valley municipal wells only when Chorro Creek surface flow is 1.4 cubic feet per second or greater. It also required the installation of monitoring devices and detailed compliance reporting. The action was taken in response to reports of over pumping.

Decision #1633 states, in part, "For the protection of fish and wildlife habitat and other public trust resources in Chorro Creek and Morro Bay, beginning when deliveries are available from the State Water Project Permittee shall: Cease all diversions from wells 9, 9A, 10, 10A, 12 and 16 or from any wells constructed and operated as replacement wells for the Ashurst well field, whenever surface flow measured in Chorro Creek downstream of the Ashurst well field is less than 1.4 cubic feet per second."

In 2009, the City and its consultant, Timothy Cleath, were caught conducting a "stream interference study" on Chorro Creek in August when the creek was completely dry. The "study" had the stated objective of eliminating Decision #1633's well use restrictions by proving that use of the wells did not impact stream flow. Clearly, with the stream completely dry, flow would not have been impacted. I believe the problem with that "logic" is obvious. In addition, before they completed their "study," the City and its consultant had pumped over two million gallons of water from the stressed aquifer and dumped the water in a nearby field.

The City was reported to the SWRCB and the "study" was halted. SWRCB personnel investigated, and found that the City had never installed the required monitoring devices and had not been submitting required compliance information.

In June 2010, a second stream interference test was attempted. This time, Chorro Creek flow levels were at an acceptable level, but the consultant failed to obtain the necessary permits, and the test was halted by Department of Fish and Game officials.

Exhibit 6 A-3-MRB-11-001 213 of 363 Residents near City well 11A (the only one of the City's Chorro Valley wells the CHD will allow to be used at present) reported that the City continues to heavily use that well, and is currently in violation of Decision #1633. SWRCB personnel have told Morro Bay residents that the matter is "in enforcement," but that specific SWRCB enforcement actions have not yet been defined. The SWRCB contact for this matter is Kathy Bare of the Water Rights Division.

The City's insistence on continuing to use the wells – and to damage the aquifer – is particularly puzzling in light of its continued resistance to including significant water reclamation facilities as part of the plans for its new wastewater treatment plant. As you know, the CCC has been forced to take over permitting authority for the plant, and staff continues to request that the City provide for water reclamation.

Requested CCC Actions

I appreciate you taking the time to review our very serious issue. I am asking for assistance in the form of an action stopping the City of Morro Bay's plans to cut off our municipal water supply and to force us to drill new domestic wells whose use would be dangerous for us and for the environment.

I request that the CCC take the following actions:

- Issue some kind of emergency order or injunction to stop the City from cutting off municipal water to Chorro Valley customers and/or assist me in bringing legal action to achieve that objective. I am hoping the Coastal Act can help provide for "citizen suits." Under Section 30803 of the Public Resources Code, citizens can bring legal action to address violations of the Coastal Act, and to enforce orders issued by the Commission.
- Issue a formal opinion regarding the government agency (or agencies) responsible for ensuring that the City's Chorro Valley water customers continue to receive municipal water supplies, in order to prevent serious negative impacts on human health and the Chorro Basin aquifer and on sensitive Coastal Zone ecosystems.
- Order the City of Morro Bay to remove the Chorro Valley aquifer, Ashurst wells and Canay well (11A) as one of the groundwater supplies declared in its Urban Water Management Plan. The City has consistently violated SWRQCB Decision 1633 since 1997, causing damage to the environment by drawing far too much water from the Chorro Basin aquifer.

I have a tremendous amount of evidence in addition to the attached documents. Please do not hesitate to contact me should you have any questions or require any further information or documents.

Sincerely,

Carrie Burt

Carrie Burton 459 Chorro Creek Road Morro Bay, Ca. 93442 805-771-8188

Exhibit 6 A-3-MRB-11-001 214 of 363



²¹⁵ of 363

State of California State Water Resources Control Board DIVISION OF WATER RIGHTS

P.O. Box 2000, Sacramento, CA 95812-2000

Info: (916) 341-5300, FAX: (916) 341-5400, Web: http://www.waterrights.ca.gov

PETITION FOR TEMPORARY URGENCY CHANGE

(Water Code 1435) Point of Diversion, _____Point of Rediversion, _____Place of Use, _____Purpose of Use

Application # 24245 Permit # 20867 License # Statement or Other

I (we) The City of Morro Bay hereby petition for a temporary urgency (Water Right Holders Name)

change(s) noted above and shown on the accompanying map and described as follows: -

Point of Diversion or Rediversion (Give coordinate distances from section corner or California Coordinates, and the 40-acre subdivision in which the present and proposed points lie.)

Present See Attachment 1

Proposed No Changes Proposed

Place of Use (If irrigation, then state number of acres to be irrigated within each 40-acre tract.)

Present Within the boundaries of the City of Morro Bays Service Area

Proposed No Changes Proposed

Purpose of Use

Present Municipal

Proposed No Changes Proposed

Does the proposed use serve to preserve or enhance wetlands habitat, fish and wildlife resources, or recreation in or on the water (See WC 1707)? No (yes/no)

The temporary urgency change(s) is to be effective from Issuance to December 1, 2009 (Cannot exceed 180 days) Will this temporary urgency change be made without injury to any lawful user of water? Yes (yes/no) See Attachment 1 Will this temporary urgency change be made without unreasonable effect upon fish, wildlife, and other instream beneficial uses? Yes (yes/no) See Attachment 1

State the "Urgent Need" (Water Code 1435(c)) that is the basis of this temporary urgency change petition (attach additional information as necessary): See Attachment 1

TEMPC-PET (10-08)

L

If the point of diversion or rediversion is being changed, is any person(s) taking water from the stream between the old point of diversion or rediversion and the proposed point?

N/A (yes/no)

Are there any persons taking water from the stream between the old point of return flow and the new point of return flow? N/A (yes/no)

If yes, give name and address, as well as any other person(s) known to you who may be affected by the proposed change.

I (we) consulted the California Department of Fish and Game concerning this proposed temporary change. <u>Yes</u> (yes/no)

If yes, state the name and phone number of the person contacted and the opinion concerning the potential effects of your proposed temporary urgency change on fish and wildlife and state the measures required for mitigation.

Jason Chance, warden 805-610-3915

Brian Erlandsen 559-243-4014 ext. 220

See Attachment 2

THIS TEMPORARY URGENCY CHANGE DOES NOT INVOLVE AN INCREASE IN THE AMOUNT OF THE APPROPRIATION OR SEASON OF USE. THIS TEMPORARY URGENCY CHANGE IS REQUESTED FOR A PERIOD OF ONE HUNDRED EIGHTY DAYS OR LESS.

I (we) declare under penalty of perjury that the above is true and correct to the best of my (our) knowledge and belief.

Dated November 17 . 19 2009	at <u>Sacramento</u> , California
Shone Conway	(916) 447-2166
Signature(s)	Telephone No.
2600 Capitol Ave., Suite 400, Sacrame	nto, CA 95816
(Address) Counsel for ci	ty of Morro Bay
NOTE: All petitions must be accompanied by the fil	ing fee, (see fee schedule at

www.waterrights.ca.gov) made payable to the State Water Resources Control Board and an \$850 fee made payable to the Department of Fish and Game must accompany this petition. Separate petitions are required for each water right.

Attachment No. 1 to Environmental Information for

Petition for Temporary Urgency Change to

Permit 20867

Held by City of Morro Bay

DESCRIPTION OF PROPOSED CHANGES

The City of Morro Bay proposes the following temporary urgency changes to Permit 20867:

- Waiver of Permit condition number 15, which provides that Permittee shall cease all diversions from Well 11A (Romero well field) whenever surface flow measured in Chorro Creek downstream of the reach depleted by extractions of groundwater from Well 11A is less than 1.4 cubic feet per second (cfs).
- Waiver of Permit condition number 17, which requires continuous monitoring of surface flows in Chorro Creek to document compliance with the minimum surface flow conditions of the Permit.

An urgent need exists for the waiver of these Permit conditions because the Romero well is currently the City's only source of water supply to meet municipal demand during the shutdown of the State Water Project due to the unavailability of the City's other local sources of groundwater supply due to contamination issues.

BASIS FOR CEQA EXEMPTION

In this case, the project is specific actions that are necessary to prevent an emergency, and as such is exempt from CEQA pursuant to Public Resources Code Section 21080(b)(4).

This petition for temporary urgency change is for a waiver of Permit conditions numbers 15 and 17, to allow pumping from the Romero well to continue even if stream flow falls below 1.4 cfs and waive the associated monitoring requirement. These actions are necessary to prevent an emergency because the Romero well is the City's only source of water supply during the scheduled SWP shutdown. In Resolution 50-09, the City Council declared that an emergency water condition exists and imposed mandatory water conservation measures. (See Resolution 50-09, attached to the Attachment to the Petition for Temporary Urgency Change as Exhibit 2).

Public Resources Code Section 21080(b)(4) and CEQA Guidelines Section 15269(c) exemption from CEQA specific actions necessary to prevent or mitigate an emergency from CEQA. In addition, CEQA Guidelines Section 15359 defines "emergency" as "a sudden, unexpected

Exhibit 6 A-3-MRB-11-001 218 of 363 occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services."

The City requires the ability to pump water from the Romero well in order to meet the municipal water demand. The City simply cannot cease diversions at its Romero well without great risk to the health and safety of its citizens. These actions are clearly required to prevent an emergency as defined above.

July 8, 2010

SENT VIA EMAIL AND REGULAR U.S. MAIL

Mr. Robert Shultz Morro Bay City Attorney 595 Harbor Street Morro Bay, CA 93442 rschultz@morro-bay.ca.us

Dear Rob:

I am following up on the meeting we had several weeks ago regarding the Burtons' property near Chorro Creek. Because we are concerned that the process is taking very long without an end in sight, we want to begin an immediate discussion of how we can expeditiously move the process forward.

During our meeting, we explained that the Burtons see only two possible paths to resolving this situation without litigation, (1) City guarantees continued delivery of City water, or (2) City agrees to purchase Burtons' residence. The City told us that infrastructure needed to continue to supply City water would be too costly, effectively making the first option infeasible. But the City appeared open to the second option of buying out the Burtons' property at a price that would reflect guaranteed City water.

We are concerned that to date, the City has not taken any concrete steps to have the property appraised, which the parties agreed is a necessary first step towards resolving this matter. The Burtons are anxious to resolve this matter as expeditiously as possible and to that end, ask that the City take the necessary steps to have the property appraised and formally begin the administrative process necessary to finalize the City's acquisition of the Burton's property.

In the event that the City is unwilling or unable to move the process forward, we will have no choice but to commence legal action against the City. With the groundwater contamination spreading and the prospect of losing City water looming, the value of the Burton's property has diminished significantly, making it virtually impossible for them to re-finance or sell their property under the current circumstances. We would therefore seek an order to force the City to permanently deliver water to the property, or seek damages for diminution of property value, breach of contract, etc. We would also seek attorney's fees and costs.

> Exhibit 6 A-3-MRB-11-001 220 of 363

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State of California—Health and Human Services Agency California Department of Public Health

MARK B HORTON, MD, LISPH Director

ARNOLD SCHWARZENEGGER

December 2, 2008

Mr. Bruce Ambo, Public Services Director City of Morro Bay 955 Shasta Avenue Morro Bay, CA 93442

ASHURST WELL FIELD

Thank you for the cooperation provided during the 2008 State Project Water (SPW) Shutdown. During the event, the Department of Public Health, Drinking Water Field Operations Branch, Carpinteria District Office (Department), was contacted by a concerned resident. The resident received a notice from the City of Morro Bay Water Department (City) concerning the quality of water they would be receiving during the SPW shutdown. The noticed warned the affected residents to not drink the water due to elevated nitrate levels and suggested the use of under the counter, residential drinking water treatment units before drinking the water.

Public Notices

Unfortunately, the Department was unaware the City was potentially delivering nonpotable water to approximately eleven connections and was also unaware the City was issuing the notice. The City must always consult the Department when 'Do Not Drink' notices, or any other notices related to a change in the the quality of drinking water, are served to customers. This allows the Department to review the notice for content and to be prepared if customers call with concerns. The notice delivered to the eleven customers should not have recommended the use of 'point of use' reverse osmosis units owned by the customers. Neither the City or the Department can be certain these devices are properly maintained and operated and therefore cannot ensure the water delivered would be safe to drink.

All future notices of this nature must be approved by the Department. For a list of notices containing required language please visit: http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Notices.aspx.

ASHURST WELLFIELD (Wells 9, 9A, 10, 10A and 16)

During discussions concerning the reason for issuing the public notice, the City explained that water from the Ashurst Well Field was needed to make up for the water that was unavailable due to the SPW shutdown. Well 16 was used to provide this

> Southern California Drinking Water Field Operations Branch 1180 Eugenia Place, Suite 200, Carpinteria, California 93013 (805) 566-1326; (805) 745-8196 fax Internet Address: http://www.cdph.ca.gov/programs/Pages/DDWEM.aspx

> > Exhibit 6 A-3-MRB-11-001 221 of 363

additional water. The well exceeds the nitrate standard at times as do most of the wells in the Ashurst Wellfield. Well 11A is a Chorro Valley Well that is and has historically been low in nitrates. Well 11A is the easternmost well located approximately 2 miles from the Ashurst Wellfield. The City operates Well 11A regularly.

In the past, the Department understood that Well 11A served several customers before blending with the Ashurst Wells (if used) before reaching a dedicated line serving the Kings Tanks. The Quintana Chlorination Station has been identified as the location where the Chorro Valley Wells blend. Prior to the installation of a chlorination facility at Well 16 in 2007, Wells 9, 9A, 10, 10A and 16 (if used) were chlorinated at the Quintana Chlorination Station.

The City has expressed concern regarding the quality of water served to approximately eleven connections near the Chorro Valley Wells. Due to the distribution system configuration, the City said there was a remote chance, under an unusual hydraulic condition, these eleven connections could receive water which is not properly blended.

The Department is requiring the City to cease the use of the Ashurst Wells 9, 9A, 10, 10A and 16. This letter serves as a notice to the City that the Department has changed the operational status of these wells to inactive.

To reactivate these wells the City must submit an application, to the Department, for their use. The application must include:

- A proposal for nitrate treatment for the Ashurst Wells. The treatment (e.g. blending) must be provided before any customer connections.
- Plans of the distribution system piping. The plans must clearly show service connections and the junction of water from Well 11A with water supplied from the Ashurst Wellfield. The plans must also show the dedicated line to the Kings Tanks and service line returning from Kings Tanks to the east end of town.
- A chlorination plan for the Ashurst Wells. The plan shall describe how all Ashurst Wells are chlorinated prior to delivery to customers.

If you have any questions regarding this letter please contact Jeff Densmore at (805) 566-1326.

Sincerely,

Kurt Souza, P.E., Chief Southern California Section CDPH-DWFOB

Cc: SLO County Environmental Health

Exhibit 6 A-3-MRB-11-001 222 of 363

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Morro Bay Realty

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Stanley Craig 805-235-0514

City of Morro Bay

595 Harbor Street Morro Bay, CA 93442-1900 (805) 772-6222

Water and Dewer Din

Due date applies to current charges only.

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Mailing Address:

MIKE OR CARRIE BURTON 459 CHORRO CREEK RD MORRO BAY, CA 93442-2401 Service Address: 459 CHORRO CREEK RD Account No: 78000130-008 Due Date: 9/30/2009 Amount Due: \$44.53



Account No. 78000130-008	Service Address 459 CHORRO CREEK F	RD	Billing Date 8/31/2009			
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PUBLIC WORKS DEPARTMENT . 695 HARBOR STREET, MORRO BAY, CALIFORNIA 93442 . 805-772-626

Burton Was 565 now 459 P

February 24, 1995

Bonnie Pierce 565 Chorro Creek Road Morro Bay CA 93442

SUBJECT: AUTHORIZATION FOR WATER METER INSTALLATION 565 CHORRO CREEK ROAD

The purpose of this letter is to confirm and record our conversations in this matter and to authorize installation of a water meter and service.

The property in question has been served potable water by the City of Morro Bay since at or about City incorporation. It is currently served via a piping connection from the Roandoak of God Christian Commune property and metered through Roandoak's meter.

You have requested permission to continue delivery of water from the City with a separate service connection and meter.

By this letter you are authorized to obtain a water meter from the City subject to the fee structure for installation of the meter and monthly usage costs per the Master Fee Schedule. The meter will be placed along Chorro Creek Road. Upon installation of the meter you will need to install (and maintain) service piping from the meter to your residence. The routing of this piping will be along the City road easement, referenced in your exhibit, for which a Special Encroachment Permit is required. This Permit can be issued "after-the-fact" based upon actual piping location. Pipeline installation details shall be in accordance with the Uniform Plumbing code.

I have asked the City's Maintenance Superintendent, Jerry Ramos, to work with you in this matter.

Thank you,

William T. Boucher Public Works Director

xc: Jerry Ramos Finance Department, Utility Billing

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Exhibit 6 A-3-MRB-11-001 225 of 363

The City of Morro Bay is dedicated to the precentation and onhards



Exhibit 6 A-3-MRB-11-001 226 of 363

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TO: City of Morro Bay c/o The Water Department Bill Boucher Public Works Officer

FROM: Bonnie Pierce 1625 8th Street Los Osos, CA 94402

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Dear City Of Morro Bay:

I would like to request in writing from the city of Morro Bay, receipt of verification of clear water rights to the property I am purchasing, described in attachment I, described as Exhibit A, Legal description, attachment II, the county parcel map #073-131-018 from the county of San Luis Obispo's Recorder's office, and attachment III, a written agreement dated August 10, 1982, between the city of Morro Bay and Delmar Roy Ashurst/Roanoak of God, concerning city rights to use an existing well 9A in exchange for water useage and the right to water on this parcel of property and two others still owned by Mr. Ashhurst also described in this agreement.

I have opened escrow with First American Insurance Company (Morro Bay office) on 5-20-93. The sellers of this property, Martin Tomich, Harlan Larsen, and Donald Thomas forclosed on this property and obtained clear title on 7-10-92 from Mr. Ashurst/Roanoak of God, and are now selling this property to myself.

Besides written verification of receipt of clear water rights requested above, I would like a determination as to weather there will be a cost to install/hook up water and a water meter to this property, now that this property is under separate ownership from the other two parcels in your agreement, how much would the cost be for installing the hookups necessary, how much would the monthly useage rate of water use be and what that monthly charge would be, the time frame and any regulations needed for completion, and who will be responsible for all of the above, for a final date for water useage?

I need this information by the close of escrow with a copy to First American Insurance Company, c/o Sharon Snyder, 685 Main Street, Suite C, Morro Bay, CA 93442.

Thank you for looking into this important matter. I will look for your decision.

Bonnie Pierce

cc: Sharon Snyder: Escrow officer for First American Insurance Company- Morro Bay Office

> Exhibit 6 A-3-MRB-11-001 227 of 363



Department of Planning and Building San Luis Obispo County

Alex Hinds, Director

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1.

2.

Bryce Tingle, Assistant Director Ellen Carr.ll, Environmental Coordinator

Barney McCay, Chief Building Official Norma Salisbury, Administrative Services Officer

January 31, 1995

Bonnie Pierce 555 Chorro Creek Road Morro Bay, Ca. 93442

SUBJECT: Building Permit Application No. <u>B940723</u>

Dear Ms. Pierce:

The Department of Planning and Building has reviewed your file and the legal lot question. The case was discussed at new case review last Wednesday, with the Director and Senior staff. It was determined that your lot was illegally created, at a time where subdivision maps were required. However in reviewing the situation with County Counsel after the meeting it was determined that we would have to issue a regular certificate because we had previously issued a building permit (grant of approval) for this specific lot. Thus you would not be required to apply for a certificate of compliance before a permit could be issued, we would however still recommend one.

The bigger issue relates to the non-conforming lot size. Your lot contains around 35,000 square feet, less than the one acre minimum parcel size for a lot served by both an individual well and septic tank. As such we can't issue a building permit for your new home to be served by well and septic tank. Your options are as follows:

Obtain public water from the City of Morro Bay, or

Obtain water from a shared well from an off site location, with County Health Department, Approval of the shared well agreement.

- 3. Another more complicated approach would be and off-site septic system easement. This would require both Department of Planning and Building as well as Health Department approval.
- 4. The fourth and even more complicated option would be obtain a Variance granted by the County Planning Commission from that regulation together with a Waiver from the State Regional Water Quality Control Board. Both of those would be difficult to obtain.
- 5. Another option would be to obtain a Lot Line Adjustment Exhibits the County to adjust the boundary of an adjacent property 228 of 363

AGREEMENT

THIS AGREEMENT is made and entered into this / 2 day of August, 1982, by and between the CITY OF MORRO BAY, a municipal corporation, hereinafter referred to as CITY, DELMAR ROY ASHURST, hereinafter referred to as ASHURST, and ROANDOAK OF GOD, A CORPORATION SOLE, hereinafter referred to as ROANDOAK.

RECITALS

WHEREAS, DELMAR ASHURST is the Presiding Apostle of ROANDOAK OF GOD, A CORPORATION SOLE and the only officer of ROANDOAK OF GOD; and

WHEREAS, CITY and IDA ASHURST entered into an agreement dated March 27, 1965 which provided for CITY'S right to use the existing Well 9-A which is located on the property described on Exhibit A and which agreement further provided for IDA ASHURST As the adjoining owner to use water for two existing residences and farm irrigation on the property described on Exhibit B; and

WHEREAS, IDA ASHURST, mother of DELMAR ASHURST, granted the property described on Exhibit A to DELMAR ASHURST; and

WHEREAS, there is a lien and abstract of judgment filed against the property, by Hospice of San Luis Obispo County, Inc. against ROANDOAK in the approximate amount of \$41,000.00; and

WHEREAS, there are liens of the County of San Luis Obispo re judgment against DELMAR ASHURST in the approximate amount of \$12,200.00 plus accrued interest; and

WHEREAS, on July 26, 1982 there was a Sheriff's sale with respect to the lien of Hospice of San Luis Obispo County, Inc. at which time Hospice bid \$30,000.00 for the property of ROANDOAK located in Paso Robles in partial satisfaction of a

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judgment in the total amount of approximately \$41,000.00; and

WHEREAS, the CITY has agreed with ROANDOAK OF GOD to purchase the right to remove water from the property described on Exhibit A and maintain the status quo as hereinafter set forth;

NOW, THEREFORE, IT IS AGREED AS FOLLOWS:

1. ROANDOAK does hereby grant to the CITY OF MORRO BAY with respect to all of the property described on Exhibit A the exclusive and perpetual right to extract water from the existing well and any future wells the CITY may drill on the property described on Exhibit A and the right to use said water for municipal purposes. The profit described herein is to include the incidental rights to use of the property described on Exhibit A as follows:

The right to install and maintain the existing well and future wells, including pump stations, pipelines, utility and telemetry lines, required for the extraction of water; the rights of ingress and egress for purposes of installing, repairing, replacing, maintaining and operating said facilities, the right to fence off a reasonable surface area surrounding said well or wells not to exceed 150 square feet unless otherwise required for health reasons as necessary to protect the wells from contamination and meet public health standards for municipal drinking water purposes, the use of the surface of the property for the exploration and discovery of future well sites on the property, the right to drill and maintain, repair and replace existing and future wells for the extraction of water. The profit granted herein is for an unlimited duration. Grantor's uses of the property shall not adversely affect the quality of such water for its intended use for municipal purpose. This grant of right is perpetual, runs

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Exhibit 6 A-3-MRB-11-001 230 of 363

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with the land described in Exhibit A, is appurtenant to such property, and binds all the heirs, successors, assigns and grantees of such property perpetually.

As partial consideration for said transfer CITY agrees to pay all future real property taxes levied against the property described on Exhibit A. ROANDOAK and DELMAR ASHURST agree to execute any and all additional documents which may be necessary to fully, completely, and perpetually grant the exclusive right to extract water from the above described property to the CITY OF MORRO BAY for use for municipal purposes. At no time shall more than two fully operational wells be maintained on the property.

2. CITY agrees to pay to ROANDOAK the sum of \$20,000.00 in cash and agrees to apply the proceeds first to reduce any indebtedness of ROANDOAK to Hospice of San Luis Obispo County, Inc. The amount paid to Hospice shall represent the difference between \$30,000.00 that Hospice bid at the Sheriff's sale and the balance owing to Hospice plus costs of approximately \$41,000.00 or approximately \$11,000.00. The remaining portion of the cash shall be paid jointly to ROANDOAK OF GOD and RAY GIRARD. This agreement is contingent upon an agreement by Bospice to accept payment of said amount and to release the lien it has on the property described on Exhibit A for said payment. If Hospice does not accept said amount CITY shall have the right, at its option, to cancel this agreement.

3. The County of San Luis Obispo currently has recorded liens affecting DELMAR ASHURST totaling approximately \$12,200.00. A judgment has been rendered in San Luis Obispo Superior Court that said liens do not apply to ROANDOAK OF GOD, A CORPORATION SOLE, successor in interest to DELMAR ASHURST. ANCA

-3-

Exhibit 6 A-3-MRB-11-001 231 of 363 The County of San Luis Obispo has appealed said judgment. ROANDOAK OF GOD and DELMAR ASHURST jointly and severally agree to indemnify the CITY OF MORRO BAY and save the CITY OF MORRO BAY harmless from any and all claims, loss, costs or expense resulting from or relating to the County liens.

4. As additional consideration for the purchase of perpetual water rights CITY agrees to provide to ROANDOAK six moorings and one boat slip at their present location or at such other comparable locations as are designated by the CITY at no charge. This right granted to ROANDOAK is a right which shall be available for the use of ROANDOAK OF GOD and its members so long as said corporation exists and has members. This right is not transferrable and may not be transferred or sold by ROANDOAK.

5. Subject to CITY usage CITY agrees to and does hereby provide to ROANDOAK grazing rights, communal work rights, recreational rights and incidental related uses, such rights do not include the right to construct structures, on approximately 5 acres owned by the CITY located east of the existing County Road and adjacent to the property described on Exhibit A at no charge. The 5 acre parcel is described on Exhibit C. With respect to use of the 5 acres described on Exhibit C, the parties agree that no grazing rights shall exist as to any areas used in the future for a water recharge basin or basins which CITY will fence. Grazing rights do not apply to a reasonable minimum area surrounding existing and future well sites as reasonably necessary to maintain and protect public health. Further, grazing rights may also be limited in the area surrounding existing or future wells to the extent it is determined by the Health Department or the State Water Resources Control Board or other agency with overriding

> Exhibit 6 A-3-MRB-11-001 232 of 363

-4-

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jurisdiction that such grazing poses a health hazard to such well or wells. Finally, CITY reserves the right to use limited areas for construction of a fire drill area and for fire drill purposes and other future City purposes where grazing shall not occur. This is a right granted to ROANDOAK so long as ROANDOAK exists and has members and is a right granted to all the members of ROANDOAK but is not transferrable.

6. In addition, CITY agrees to supply to ROANDOAK, free of charge, from the existing or any future well located on the property described on Exhibit A, domestic water for residences and adjoining structures not to exceed 1,100,000 gallons per month prorated on a daily basis. ROANDOAK cannot transfer, sell or otherwise provide this water to a parcel other than the parcel described on Exhibit B. * The parties agree that the property which CITY will serve with water is all property presently owned by ROANDOAK. Said property is described on Exhibit B. This agreement includes all property described by deeds recorded in the name of ROANDOAK as follows:

Quitclaim deed - document number 6565, recorded February 10, 1978, Volume 2046, Page 897;

Grant deed - document number 10487, recorded April 8, 1975, Volume 1827, Page 146;

Joint Tenancy Grant deed - document number 17432, recorded July 24, 1964, Volume 1307, Page 594; and

Quitclaim deed - document number 6564, recorded February 10, 1978, Volume 2046, Page 896.

To the extent that any property described on Exhibit B does not presently stand in the name of ROANDOAK OF GOD, the rights granted shall not apply. The property described on Exhibit B consists of approximately three acres. The right to

-5-

If Roandoak sells the property described on Exhibit B, City will provide domestic water from the well or wells located on the property described on Exhibit A for use on the three (3) acres described on Exhibit B only provided that the total amount supplied shall not exceed 500,000 gallons per month prorated on a daily basis and successors in interest other than Roandoak shall pay City's pumping cost for water used. Mater supplied shall be used only on the property described on Exhibit B.

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Exhibit 6 A-3-MRB-11-001 233 of 363 use of water applies to the grantees and successors in interest to said property and not to other property.

7. In the event CITY elects to file a condemnation action to acquire exclusive and perpetual water rights on the property described on Exhibit A, ROANDOAK agrees to allow CITY to proceed to condemnation by default judgment subject to each and all of the terms and conditions of this agreement and for the consideration provided for in this agreement.

 Bach of the parties hereto agrees to execute all other documents required under this agreement.

9. CITY reserves the right to terminate this agreement in the event it elects, at its sole option, to terminate its rights to use water from the property described on Exhibit A provided CITY shall give ROANDOAK at least 120 days prior written notice.

CITY OF MORRO BAY A Municipal Corporation BY

ATTES

DELMAR ROY ASHURS

ROANDOAK OF GOD, A CORPORATION SOLE

BY: Delman Rog DELMAR ROY ASHURST

Presiding Apostle of ROANDOAK OF GOD, A CORPORATION SOLE

OFFICE OF THE PRESIDING APOSTLE OF ROANDOAK OF GOD, A CORPORATION SOLE

BY: Pelmanko DELMAR ROY ASHURST

Presiding Apostle

-6-

STATE OF CALIFORNIA

) 85.

COUNTY OF SAN LUIS OBISPO

Onic provide 214 , 1982, before me, the undersigned, a Notary Public in and for said state, personally appeared EUGENE SHELTON, known to me to be the Mayor and PAUL BAXTER, known to me to be the City Clerk of the municipal corporation that executed the within instrument, known to me to be the persons who executed the within instrument on behalf of the municipal corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to a resolution of its City Council.

WITNESS my hand and official seal.



(Name typed or printed) Notary Public in and for said County and State.

STATE OF CALIFORNIA

COUNTY OF SAN LUIS OBISPO

Onclusprit 10, 1982, before me, the undersigned, a Notary Public in and for said state, personally appeared DELMAR ROY ASHURST, known to me to be the Presiding Apostle of ROANDOAK OF GOD, A CORPORATION SOLE, also known as OFFICE OF THE PRESIDING APOSTLE OF ROANDOAK OF GOD, A CORPORATION SOLE, the corporation sole that executed the within instrument, known to me to be the person who executed the within instrument on behalf of the corporation sole therein named, and acknowledged to me that such corporation sole executed the within instrument pursuant to its by-laws or a resolution of its Board of Directors.

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WITNESS my hand and official seal.



PICLIARDS IN TOL: A in (Name typed or printed) Notary Public in and for said County and State.

Exhibit 6 A-3-MRB-11-001 235 of 363

-7-

STATE OF CALIFORNIA

COUNTY OF SAN LUIS OBISPO

On $linguet_10$, 1982, before me, the undersigned, a Notary Public in and for said state, personally DELMAR ROY ASHURST, known to me to be the person whose name is subscribed to the within instrument, and acknowledlged to me that he executed the same.

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)

WITNESS my hand and official seal.

My Com

WCTORIA M. RICHARDS NOTARY PUBLIC SAN LUIS OBISPO COUNTY CALIFORNIA on Expires on April 5, 1984

M. PICHAPES CTOLIA (Name typed or printed) Notary Public in and for said County and State.

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Exhibit 6 A-3-MRB-11-001 236 of 363

-8-

EXHIBIT A

That portion of Lot 4 of Manford Brown Little Ranches, in the County of San Luis Obispo, State of California, as per map recorded in Book 3, Page 90 of Maps, in the office of the County Recorder of said County, described as follows:

Beginning at the northeasterly corner of said Lot 4, thence along the easterly line of said Lot 4, South 3° 01' West 759.05 feet; thence North 86° 59' West 20 feet to the true point of beginning; thence continuing North 86° 59' West 215.66 feet to the Easterly line of the land described in the deed to Delmar Roy Ashurst and wife, recorded July 24, 1964 in Book 1307, Page 594 of official records, in the office of the County Recorder of said county; thence along the Easterly line of the land described in said deed, South 3° Ol' West 78 feet to the Northerly line of the land described in the deed to Robert M. Ashurst, recorded May 27, 1964, in Book 1290, Page 309 of said official records; thence along said Northerly line South 86° '59' East 215.66 feet to a line that is parallel with and distant Westerly 20 feet, measured at right angles, from the Easterly line of said Lot 4, thence along said parallel line, North 3° 01' East 78 feet to the true point of beginning.

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DRA

EXHIBIT A

Exhibit 6 A-3-MRB-11-001 237 of 363

DESCRIPTION

PARCEL 1:

THAT PORTION OF LOTS 4 AND 5 OF MANFORD BROWN LITTLE RANCHES, IN THE COUNTY OF SAN LUIS OBISPO, STATE OF CALIFORNIA, ACCORDING TO THE MAP THEREOF, RECORDED MARCH 18, 1927 IN BOOK 3, PAGE 90 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE WEST LINE OF SAID LOT 5, DISTANT THEREON SOUTH 3° 01' WEST, 617.42 FEET FROM THE NORTHWEST CORNER OF SAID LOT;

THENCE CONTINUING SOUTH 3° 01' WEST ALONG SAID WEST LINE, 386.51 FEET;

THENCE LEAVING SAID LINE, SOUTH 85° 59' EAST, 563.50 FEET TO A STAKE IN THE WEST LINE OF A 20 FOOT PRIVATE ROAD, AND 20 FEET WEST FROM THE EAST LINE OF SAID LOT 4; THENCE ON SAID ROAD LINE NORTH 3° 01' EAST, 386.51 FEET TO A

POINT WHICH BEARS SOUTH 3° 01' WEST, 615.05 FEET AND NORTH 86°. 59' WEST, 20 FEET FROM THE NORTHEAST CORNER OF SAID LOT 4; THENCE NORTH 86° 59' WEST, 563.5 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH A RIGHT OF WAY FOR A ROAD 20 FEET WIDE ALONG THE EAST LINE OF SAID LOT 4 AND EXTENDING NORTHERLY FROM THE SOUTH-EAST CORNER OF THE PROPERTY ABOVE DESCRIBED TO THE SAN LUIS OBISPO AND CAMBRIA PUBLIC ROAD.

EXCEPT THEREFROM THAT PORTION THEREOF DESCRIBED IN THE DEED FROM D. R. ASHURST, A MARRIED MAN, TO ROBERT M. ASHURST, A MARRIED MAN, RECORDED SEPTEMBER 26, 1960 IN BOOK 1085, PAGE 447 OF OFFICIAL RECORDS.

*ALSO EXCEPT THEREFROM THAT PORTION OF SAID LAND DESCRIBED IN THE DEED TO ROBERT M. ASHURST, A SINGLE MAN, RECORDED MARCH 27, 1964 IN BOOK 1290, PAGE 309 OF OFFICIAL RECORDS.

ALSO EXCEPT THEREFROM THAT PORTION OF SAID LAND DESCRIBED IN THE DEED TO JOHN BANTNER, RECORDED MAY 26, 1970 IN BOOK 1566, PAGE 737 OF OFFICIAL RECORDS.

PARCEL 2:

THAT PORTION OF LOTS 4 AND 5 OF MANFORD BROWN LITTLE RANCHES, IN THE COUNTY OF SAN LUIS OBISPO, STATE OF CALIFORNIA, ACCORDING TO THE MAP THEREOF, RECORDED MARCH 18, 1927 IN BOOK 3, PAGE 90 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

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Exhibit 6 A-3-MRB-11-001 238 of 363

Exhibit 6 A-3-MRB-11-001 239 of 363

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(END OF DESCRIPTION)

THENCE NORTH 3º 01' EAST, 20 FEET ALONG THE ROAD RIGHT OF WAY ALONG THE EAST LINE OF SAID LOT 4; THENCE NORTH 86° 59' WEST, 375.66 FEET TO A POINT OF INTERSECTION OF THE EAST LINE OF PROPERTY RECORDED TO ROBERT N. ASHURST, SEPTEMBER 25, 1960 IN BOOK 1085, PAGE 447 OF OFFICIAL RECORDS; THENCE SOUTH 3° 01' WEST, 10 FEET ALONG SAID PROPERTY LINE TO THE SOUTHEAST CORNER OF THIS PROPERTY; THENCE NORTH 86° 59' WEST, 187.84 FEET TO INTERSECTION WITH WEST LINE OF LOT 5 OF MANFORD BROWN LITTLE RANCHES; THENCE SOUTH 3° DI' WEST, 10 FEET ALONG SAID LINE OF LOT 5; THENCE SOUTH 860 59' EAST, 563.50 FEET TO THE POINT OF BEGINNING.

THAT PORTION OF LOTS 4 AND 5 OF MANFORD BROWN LITTLE RANCHES, IN THE COUNTY OF SAN LUIS OBISPO, STATE OF CALIFORNIA, ACCORDING TO MAP RECORDED MARCH 18, 1927 IN BOOK 3, PAGE 90 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS . FOLLOWS : BEGINNING AT A POINT FROM THE NORTHEAST CORNER OF SAID LOT 4,

WHICH BEARS SOUTH 3º 01' WEST, 857.05 FEET AND NORTH 86º 59'

PARCEL 3:

EXCEPT THAT PORTION OF SAID LAND DESCRIBED IN THE DEED TO ROBERT M. ASHURST, RECORDED MARCH 27, 1964 IN BOOK 1290, PAGE

TOGETHER WITH A RIGHT OF WAY FOR A ROAD 20 FEET WIDE ALONG THE EAST LINE OF SAID LOT 4 AND EXTENDING NORTHERLY FROM A POINT WHICH BEARS SOUTH 3° 01' WEST, 857.05 FEET FROM THE NORTHEAST CORNER OF SAID LOT 4 TO THE SAN LUIS OBISPO AND CAMBRIA PUBLIC

THENCE LEAVING SAID WEST LINE, SOUTH 86° 59' EAST, 187.84 FEET TO A POINT 114.56 FEET WEST FROM THE EAST LINE OF SAID LOT 5; THENCE NORTH ON A LINE 3º 01' EAST, 232 FEET TO A POINT WHICH BEARS SOUTH 3° 01' WEST, 615.05 FEET AND NORTH 86° 59' WEST, 395.56 FEET FROM THE NORTHEAST CORNER OF LOT 4; THENCE NORTH 86° 59' WEST, 187.84 FEET TO THE POINT OF BEGINNING.

THENCE CONTINUING SOUTH 3º 01' WEST ALONG SAID WEST LINE, 232

BEGINNING AT A POINT ON THE WEST LINE OF SAID LOT & DISTANT THEREON SOUTH 3º 01' WEST, 617.42 FEET FROM THE NORTHWEST CORNER

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PROPERTY DESCRIPTION

Commencing at a point, that point being the north westerly corner of lot 3, Manford Brown Little Ranches as recorded March 18, 1927 in Volume 3, page 90 of Maps, San Luis Obispo County Records, thence S 3°01'W 738.80 feet to the True Point of Beginning;

Thence	S	86°59'E	300.50'	thence
	S	3°01'₩	618.30'	thence
	S	53°41'W	191.40'	thence
	S	73°28'W	161.80'	thence
	N	3°01'E	793.70'	to the true point of

beginning; said parcel containing 4.99 acres.

EXHIBIT C NRA

Exhibit 6 A-3-MRB-11-001 240 of 363


Morro Bay, CA 93442 • 805-772-6200

lease

April 26, 2010

Joseph Goodwin PO Box 311 Morro Bay, CA 93443

Carrie Burton 459 Chorro Creek Road Morro Bay, CA 93442

Water Service Re:

Dear Mr. Goodwin and Ms. Burton:

As you are aware, on January 11, 2010 the City Council voted unanimously to terminate the Agreement between Roandoak and the City of Morro Bay dated August 10, 1982. Therefore, pursuant to Paragraph 9 of the Agreement, all rights and obligations pursuant to the Agreement will terminate on May 11, 2010.

With the termination of the Agreement on May 11, 2010, the City will no longer be required to provide water to your property pursuant to the Agreement. However, as part of the motion to terminate the agreement, the City Council also directed that there would be no discontinuation of water service until a new agreement is reached.

In order to continue to provide water services until a new agreement is reached, the City will be providing water services to your property pursuant to the following sections of the Morro Bay Municipal Code:

13.04.010 Statement of policy.

The city will furnish water service in accordance with the regulations contained in this chapter and in accordance with other applicable ordinances, to any property within the city limits and to such areas outside the city limits as the council may designate.

ADMINISTRATION 595 Harbor Street

CITY ATTORNEY 595 Harbor Street

FINANCE DEPARTMENT 595 Harbor Street

FIRE DEPARTMENT 715 Harbor Street

HARBOR DEPARTMENT 1275 Embarcadero Road

POLICE DEPARTMENT 870 Morro Bay Boulevard PUBLIC SERVICES 955 Shasta Avenue

RECREATION & PARKS 1001 Kennedy Way

> Exhibit 6 A-3-MRB-11-001 241 of 363

13.04.040 Limitation of city responsibility.

Nothing in this chapter shall be construed as a contract on the part of the city to furnish its water for any definite period or as a public utility in respect to any water furnished outside the city.

For the Burton property, this means that you will continue to receive monthly water billings for water services at your current rate. For the Roandoak property, this means that you will now receive monthly water billings for water service and begin paying the City for water services.

Pursuant to City Council direction, staff looks forward to continuing to negotiate with you to reach an agreement on discontinuing municipal water service to your property. If you have any questions, please do not hesitate to call.

Sincerely,

Par + S Robert Schultz

cc: R. Livick D. Wade

> Exhibit 6 A-3-MRB-11-001 242 of 363

Fwd: Still going to annex?Fwd: 2007 annex application

Page 1 of 1

From: Carrie Burton <carriemikeburton@aol.com>
To: carriemikeburton <carriemikeburton@aol.com>
Subject: Fwd: Still going to annex?Fwd: 2007 annex application
Date: Tue, Jan 10, 2012 10:47 am





----Original Message-----From: Rob Schultz <<u>rschultz@morro-bay.ca.us</u>> To: carriemikeburton <<u>carriemikeburton@aol.com</u>> Cc: Andrea Lueker <<u>ALueker@morro-bay.ca.us</u>> Sent: Wed, Dec 7, 2011 9:42 pm Subject: Re: 2007 annex application

Hi Carrie,

The annexation of the City wells in the chorro wells has not been a high priority since the City cannot use those wells at this time. Once the issues are resolved, the City will begin the process.

Rob Schultz City Attorney City of Morro Bay 595 Harbor Street Morro Bay, 93442 (805) 772-6568 (voice) (805) 772-6572 (fax)

This message may contain confidential or privileged information. If you received this message in error, please contact the sender and then delete this message from your system.

>>> Carrie Burton 12/07/11 1:46 PM >>>

Hi can you tell me why the application for annexation in 2007 was not submitted to LAFCO.

Attached is the City staff report and discussion on it.

Carrie



- FROM: Bruce Ambo, Public Services Director
- SUBJECT: Adoption of a Resolution of Intention to Annex City-Controlled/Owned Properties in the Chorro Valley

RECOMMENDATION:

It is recommended that the City Council: a) adopt a Resolution of Intention to annex City-controlled and owned properties in the Chorro Valley, b) authorize the expenditure of Water Funds for the annexations, and c) direct staff to begin the annexation process with the Local Agency Formation Commission (LAFCO).

FISCAL IMPACT:

The LAFCO application fees are \$4,000 and the preparation of the application submittal materials (maps, legal descriptions, environmental, etc) is approximately \$5,000, for a total estimated cost of \$9,000. Funds are available for these expenses in the Water Fund since the all the sites proposed for annexation are City water facilities (water wells and associated facilities).

There will actually be a small amount of City property taxes that will be diverted from the County to the City once the annexation is completed, resulting in a net financial gain (savings) to the City in perpetuity.

BACKGROUND:

The City has been involved in the LAFCO Sphere of Influence/Municipal Service Review (SOI/MSR) process for about the past six months. LAFCO staff has made presentations on the SOI/MSR to the Planning Commission and City Council on May 7 and May 29 respectively. Both the Planning Commission and the City Council have objected to the elimination of the Sphere of Influence recommended by LAFCO staff. Most recently the Mayor, several Council members and staff attended the LAFCO Board hearing on June 21 and raised these and many other concerns for the record. The hearing was continued for 3 months to see if these issues could be resolved in a Memorandum of Agreement (MOA) between the City and the County. Work on the MOA continues with County, LAFCO and City staff.

A "future agenda item" was added at the May 29 Council meeting to initiate annexation proceedings for several areas currently inside the City's Sphere of Influence but proposed for removal by LAFCO staff. On June 11, the City Council considered the annexations (6/11/07 Council Staff Report – Attachment 1) and

 Prepared by:
 BA
 Dept. Review:

 City Manager Review:
 <u>*REH*</u>

Exhibit 6 A-3-MRB-11-001 244 of 363 Page 2 August 13, 2007 Council Staff Report Re: Adoption of Resolution of Intention to Annex City-Owned Properties in the Chorro Valley

tabled the discussion after LAFCO staff highlighted the complexities in annexing large land areas that were under numerous private ownerships. Since then, LAFCO staff has indicated that it would be possible to annex only the City-owned properties in the Chorro Valley where the City water well sites are located.

DISCUSSION:

There are approximately 7 acres of City-owned well sites in the Chorro Valley. Having these well sites under the total control of the City for permitting purposes is in the City's interest because a higher priority can be placed under our permitting process than that of the County's. Furthermore, these are critical and essential services that provide drinking water and water for fire protection to the community. In addition, there are several residential water customers in the Chorro Valley that rely upon this water too. A Resolution of Intention to annex (Attachment 2) is required in order for LAFCO to begin the process.

Annexation Process

LAFCO staff has indicated that this annexation is fairly simple and straightforward, and expects it to take from 90 to 120 days upon submittal of the application package. LAFCO staff will conduct the environmental review and there will likely be additional information the City needs to provide to complete the analysis. The key steps in this annexation process are as follows:

- County review of the annexation maps and legal descriptions in accordance with the State mandated procedures for property annexations.
- Negotiated Tax Agreement between the City and the County agreeing to the terms of the tax exchange. This is normally done between the County Administrator and the City Manager, and in this case should be relatively easy since there isn't much property or property value from taxes involved since these are publicly owned City properties.
- Approval of the Negotiated Tax Agreement by the City Council and the Board of Supervisors.
- LAFCO Board hearing and approval of the annexation. A Certificate of Completion is filed with the County Recorder, which is then sent to the State Board of Equalization for final administrative processing for the distribution of taxes.

CONCLUSION:

The Council has previously considered annexing properties in the Chorro Valley, and it now appears that annexing only the City-owned properties would be a fairly simple process. Annexing these critical water system facilities would provide a higher level of control for the City by eliminating the need to obtain permits from the County. The Water Fund would cover any costs associated with processing this proposal.

Attachments:

- 1. 6/11/07 Council Staff Report w/o Attachments
- 2. Resolution of Intention to Annex City-Owned Properties in the Chorro Valley

RESOLUTION NO. 40-07

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MORRO BAY, CALIFORNIA APPROVING INITIATION OF PROCEEDINGS FOR THE ANNEXATION OF CITY-OWNED PROPERTIES IN THE CHORRO VALLEY

THE CITY COUNCIL City of Morro Bay, California

WHEREAS, City of Morro Bay City Council desires to initiate proceeding pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, commencing with Section 56000 of the California government Code, for annexation of territory to the City of Morro Bay; and

WHEREAS, this resolution is submitted to comply consistent with Government Code Section 56700; and

WHEREAS, the Notice of Intent to adopt this Resolution of Application has been given according to Government Code Section 56654(b); and

WHEREAS, the following agency or agencies would be affected by the proposed jurisdictional changes: Agency: County of San Luis Obispo. Nature of Change: Annex into the City of Morro Bay; and

WHEREAS, the territory is uninhabited. A map of the territory is attached hereto as Exhibits A, and is incorporated herein by this reference; and

WHEREAS, the proposed annexation is subject to the following terms and conditions;

a. The property is intended to be used by the City of Morro Bay for operation and maintenance of City water wells and associated public facility uses. The City of Morro Bay does not intend for the property to be used for any other use.

WHEREAS, the City of Morro Bay intends to file an application with the County of San Luis Obispo requesting a change in land use from the current agriculture zoning to public facilities; and

WHEREAS, LAFCO will assume Lead Agency status, responsible for compliance with the California Environmental Quality Act (CEQA) and the City of Morro Bay shall pay for any studies needed to comply with CEQA; and

WHEREAS, LAFCO had determined that this proposal meets the criteria for waiver of Conducting Authority proceedings as set forth in Government Code Section 56663(a).

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Morro Bay hereby adopts and approves this Resolution of Application, and hereby requests that LAFCO proceed with the processing of this sphere of influence amendment and the annexation of territory as authorized and in the manner provided by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

PASSED AND ADOPTED by the City Council of the City of Morro Bay at a regular meeting thereof held on the 13th day of August 2007 on the following vote:

AYES: NOES: ABSENT: ABSTAIN:

JANICE PETERS, Mayor

Exhibit 6 A-3-MRB-11-001 246 of 363

SAN LUIS OBISPO COUNTY HEALTH AGENCY



Public Health Department

2191 Johnson Avenue San Luis Obispo, California 93401 805-781-5500 • FAX 805-781-5543

> Jeff Hamm Health Agency Director

Penny Borenstein, M.D., M.P.H. Health Officer

December 2, 2010

Mike and Carrie Burton 459 Chorro Creek Road Morro Bay, CA 93442

Subject: The City of Morro Bay's Proposal to Cut Off Municipal Water to 459 Chorro Creek Road, Morro Bay, CA – APN 073-131-018

Dear Mr. and Mrs. Burton:

This letter is in response to your request that the San Luis Obispo County Public Health Department (County) comment on a proposal being made by the City of Morro Bay (City) that an alternative water supply provide domestic water to your residence at 459 Chorro Creek Road.

Specifically, the City is proposing that domestic water be provided to your residence from your on-site irrigation well, replacing the municipal water which is currently provided by the City. After reviewing the information you provided, the County has the following comments.

Based on the information provided, the land use and well history of your area, the County is concerned that the local groundwater supply where your irrigation well draws from is significantly degraded from a water quality standpoint. Water quality testing has historically shown high nitrate levels exist in both the surrounding City and private wells in the area.

To illustrate the County's concern, it appears the existing on-site irrigation well on your property, which the City is proposing to be your domestic water supply, is located within 100 feet of your septic system's replacement area. Septic system expansion areas are critical as they are often the only remedy left to a homeowner to fix a failing septic system. Such replacement areas are especially important in your area as soil conditions and groundwater levels are known to be marginal for on-site wastewater disposal. It is also our understanding this well is located within the 100 foot minimum separation distance of a neighboring property's septic system.

The County's current land use standards prohibit a well and septic system on lots less than one acre. Less than one acre lots are currently prohibited due to the problem of maintaining a safe distance between both on and off-site well supplies and septic systems (including the 100% septic system replacement area). Larger lots can better accommodate septic systems and replacement areas.

However, regardless of lot size, it is the water quality problems, probably due to existing septic

systems constructed in marginal soils and close to high groundwater that will likely continue to be a significant public health issue in your small community.

In an effort to mitigate the public health threat from your irrigation well water, it is understood the City has proposed to install a water treatment system on said well. This option is a concern, as water treatment devices require a committed monitoring and maintenance regime from homeowners. While such devices can adequately treat drinking water, these devices are not failsafe and where one homeowner will be responsible in maintaining their water treatment system, other individuals may not be so committed setting up the possibility of contaminated water entering the domestic system. To complicate matters, years down the road, a subsequent homeowner may not be aware of the necessity to treat the well water as the water treatment device could have been compromised or even removed by a previous owner. Where there is the threat of high nitrate in the drinking water supply, the Public Health Department is concerned about the potential for methemoglobinemia, also known as blue baby syndrome. Even in today's sophisticated health conscious society, cases of blue baby syndrome still occur in the United States. Also, some adults with certain medical conditions can have complications due to high nitrate water. Some studies have also suggested spontaneous abortions and birth defects can be associated with the consumption of water high in nitrate.

In addition, be advised that any proposal to drill new wells in this area will require a thorough review by this office due to the small lots, on/off-site septic systems and on-site wastewater disposal system replacement area encroachment issues.

In closing, the proposal to switch you from a municipal water supply to a known contaminated well (even though it may have a water treatment device), from a public health viewpoint appears to be less than a satisfactory resolution to safe long-term water service.

This office would hope the City would find a way to keep you and the other affected residents on municipal water so as to eliminate the risk of area residents consuming water from a compromised water supply.

Sincerely,

Richard J. Lichtenfels, R.E.H.S., M.P.H.

Supervising Environmental Health Specialist

Cc: Kurt Souza, CDPH

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Exhibit 6 A-3-MRB-11-001 248 of 363 11 homes. After the shut-down order, city officials would have to pony up and build another line to keep serving those homes. "So we've got quality and quantity issues

out there," said resident Linda Stedjee. Stedjee isn't one of the affected homeowners but is part of a group of disaffected residents becoming increasingly critical of the city over its water problems.

Another problem: The city's only functioning well is subject to another state regulation. Well 11A lies outside the Ashurst field and Public Health Department restrictions, but falls under earlier State Water Quality Control Board pumping restrictions enacted when the city was first permitted to tap water in the Chorro Valley. Under the agreement, the state permitted the city to pump water only when the Chorro Creek flows high enough so that it won't be sucked dry. City officials were required to install gauges on the creek and submit annual reports to the state. That was in 1997 and little happened

That was in 1997 and ittle happened until resident John Jones complained to the water board that the city hadn't installed any gauges and submitted less than half its required reports. State officials cracked down again and city officials agreed to install the gauges and begin submitting daily reports to the state beginning this year.

"The bottom line is Morro Bay never did anything and they just pumped when they wanted," Jones told *New Times*. His property is near well 11A, which is the cleanest city well and now the only one the city can use.

Jones, other residents, and the California Department of Fish and Game have alleged the city's illegal pumping completely dried portions of the creek at times. According to Fish and Game, such over-pumping could trap steelhead in isolated pools and hinder the flow of water into the Morro Bay National Estuary.

While much about the city's water is unknown, the only thing that now seems certain is Morro Bay—particularly residents of 11 homes—has a rough year ahead. City officials recently began meeting with a few residents, which has quelled some of the more outspoken of them who have since become squeamish of speaking out further in public and hurting a potential deal with the city to keep receiving water. Δ

Staff Writer Colin Rigley can be reached at crigley@newtimesslo.com.



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Exhibit 6 A-3-MRB-11-001 249 of 363



Morro Bay, CA 93442 • 805-772-6200 www.morro-bay.ca.us

Important Notice Regarding Nitrate Contamination

November 19, 2008

We have test results on coliform contamination

Mike & Carrie Burton 459 Chorro Creek Road Morro Bay, CA 93442 Water Customer Number: 78000130

Dear Mr. & Mrs. Burton:

As you are probably aware, each year the State Water Project (the primary water supply for the City of Morro Bay) is taken offline for maintenance. This year the shutdown was scheduled for October 27th to November 16th. We have completed the shutdown period and are resuming our normal water supply operation. Feel free to use the water we provide to you as you normally would for drinking, cooking, and bathing purposes.

At this time we are conducting an analysis to determine the sources of the nitrate contamination in the City wells in the Ashurst well field. For those of you who have allowed our consultant access to the wells on your property or water samples we thank you for your cooperation. We will keep you informed as the results are presented to us.

As a water user outside of the City limits, water is provided to your property through an individual agreement. Please provide the Public Services Department a copy of the agreement that provides you water from the City system. Depending on the results of the nitrate study, and long-term water supply projections, the terms and conditions of these agreements may need to be revisited.

Please contact Dylan Wade in the Public Services Department at 805-772-6261 with any questions.

Sincerely.

Director of Public Services

FINANCE 595 Harbor Street

HARBOR DEPARTMENT 1275 Embarcadero Road ADMINISTRATION 595 Harbor Street

CITY ATTORNEY 955 Shasta Avenue FIRE DEPARTMENT 715 Harbor Street

POLICE DEPARTMENT 850 Morro Bay Boulevard PUBLIC SERVICES 955 Shasta Street Exhibit 6 REAREMIREN 1001PARKS 1001 250 rof 363/ay

attached



Morro Bay, CA 93442 • 805-772-6200

March 13, 2009

Mike & Carrie Burton 459 Chorro Creek Road Morro Bay, CA 93442

Water Customer Number: 78000130-008

Dear Mr. & Mrs. Burton:

On November 19, 2008, the City sent you a correspondence concerning the annual shutdown of the State Water Project (the primary water supply for the City of Morro Bay) for maintenance and to inform you of an analysis being performed to determine the sources of nitrate contamination in City wells in the Chorro Valley.

The correspondence also requested that you provide the City with documentation allowing for your use of City water. In case you are not aware, Morro Bay Municipal Code Chapter 13.04 requires that you have an agreement with the City in order for the City to continue to furnish water service to your property. To date, the City has received no documentation from you. In order to make certain that both you and the City are in compliance with Morro Bay Municipal Code Chapter 13.04, I would like to arrange a meeting with you to discuss various options and/or agreements. Therefore, please contact my legal assistant, Marjy Rau, at (805) 772-6568 to set up a meeting.

Sincerely,

Robert Schultz

ADMINISTRATION 595 Harbor Street

HARBOR DEPARTMENT 1275 Embarcadero Road CITY ATTORNEY 595 Harbor Street

POLICE DEPARTMENT 870 Morro Bay Boulevard FINANCE DEPARTMENT 595 Harbor Street

> PUBLIC SERVICES 955 Shasta Avenue

FIRE DEPARTMENT 715 Harbor Street

RECREATION & PARKS 1001 Kennedy Exhibit 6 A-3-MRB-11-001 251 of 363



Morro Bay, CA 93442 • 805-772-6200 www.morro-bay.ca.us

September 21, 2009

Mike & Carrie Burton 459 Chorro Creek Road Morro Bay, CA 93442

Re: Public Hearing on September 28, 2009 to discuss water services outside of the City limits.

Mr. and Mrs. Burton,

As you may be aware, the City of Morro Bay has faced challenges with the changing water quality of the wells in the Chorro Valley. You may not be aware that when the water supply wells in the Chorro Valley are operating, you receive water directly from those wells with only minimal treatment (chlorination). In the past, the City was able to provide you this water and meet all of the State and Federal requirements for the safety of that water. With changes to the water quality and increasing regulatory requirements, the City cannot guarantee that this will continue into the future.

We have recently completed a study in an attempt to determine the source of the nitrate contamination and will be taking steps to see it reduced in the future. However, the contamination of our wells from nitrates, and the vulnerability of the wells to bacteriological contamination, has greatly impacted the City's ability to supply water to the water users in the Chorro Valley while meeting the demands of residents within the City limits.

The purpose of this letter is to inform you that the City of Morro Bay is reviewing its policy regarding supplying water outside of the City limits and specifically supplying water to customers in the Chorro Valley. The global policy discussion on whether or not the City should be providing water to anyone outside of the City limits will be the subject of this hearing. Because all of the customers outside of the City limits are in the Chorro Valley and are tied directly into well pumping lines, and the water quality of these wells has been impacted, the City water supply to your residence is being reviewed at this hearing as well.

We invite you to please come to the hearing, listen to the presentation, and provide comments to the City Council as they review the challenges to continue supplying water in the Chorro Valley.

FINANCE 595 Harbor Street HARBOR DEPARTMENT 1275 Embarcadero Road ADMINISTRATION 595 Harbor Street CITY ATTORNEY 955 Shasta Avenue FIRE DEPARTMENT 715 Harbor Street

POLICE DEPARTMENT 850 Morro Bay Boulevard PUBLIC SERVICES 955 Shasta Street Exhibit 6 RECARBANIEN MODPARKS 1001 K2521061363ay Some of the alternatives to be discussed to continue to supply water in the Chorro Valley will likely include:

- 1- Costs and challenges of constructing water treatment plants in the Chorro Valley to treat the well water prior to introducing it into the pumping lines from which you are supplied water.
- 2- Costs and challenges of extending a potable water distribution pipeline to serve the needs of the Chorro Valley residents.
- 3- Ramifications to the City's water supply portfolio to continue providing water to customers outside of the City as we have historically, and information regarding what written agreements are in place for the use of the water.

We will be posting the staff report on the City's website in the coming week. Please review this report as it will outline the key points of this important discussion. This may be your best opportunity to comment to the Morro Bay City Council on the action they are contemplating, and what course of action to take in regards to your City water connection.

The Public Hearing is scheduled to begin promptly at 7:00pm on September 28, 2009 at the Vets Hall, 209 Surf Street, Morro Bay.

If you have questions regarding this letter please contact Dylan Wade the Utilities/Capital Projects Manager for the City at 772-6261.

Sincerely.

Bruce Ambo Public Services Director City of Morro Bay

Cc: City Council City Manager City Attorney

> Exhibit 6 A-3-MRB-11-001 253 of 363



AGENDA NO: B-1

MEETING DATE: 9/28/09

Staff Report

TO: Honorable Mayor and City Council

DATE: September 22, 2009

FROM: Dylan Wade, Utilities/Capital Projects Manager

SUBJECT: Policy Discussion on Water Services outside of City limits.

RECOMMENDATION:

It is recommended that the City Council review the Policy for providing water service outside of the City limits and provide direction to Staff on whether or not to continue to provide water services outside of the City limits.

FISCAL IMPACT:

Depending on the course of action the City Council selects, there will potentially be large costs or cost savings for the water users within the City limits. In order to continue to provide water service outside of City limits, significant infrastructure investments will be necessary. Analyzed alternatives could have reoccurring costs of up to several hundred thousand per year, and capital costs approaching two million dollars.

BACKGROUND:

The City of Morro Bay's Municipal Code indicates, "The City will furnish water service in accordance with the regulations contained in this chapter and in accordance with other applicable ordinances, to any property within the City limits and to such areas outside the City limits as the Council may designate."

From time to time since the incorporation of the City, water meters and water services have been provided to customers outside of the City limits. Some of these connections were made following the procedure outlined in the municipal code with a designation by Council, while others were made in order to secure access or water for the City. There are others that have no available records pertaining to their connection.

Prepared By:	Dept Review:
City Manager Review:	
City Attorney Review:	Page 1 of 6

Currently the City has a water service at twelve locations outside of the City limits. From an investigation of the existing documentation and from discussions with the property owners over the last year, the City has been able to glean the information about each connection a summary of which is provided in Attachment No. 1.

The City of Morro Bay has four sources that are used to supply water listed in order of supplied volume; State Water, the Chorro Groundwater Basin, the Desalination Plant, and the Morro Groundwater Basin. All of these resources have faced challenges in the last several years to their operation. Both the Morro and Chorro groundwater basins have been impacted by pollution. The Desalination Plant has an iron problem with its seawater feed system and has only been used in the last several years to treat water from the Morro Groundwater Basin to remove nitrates. The State Water Project has had several judicial decisions that have reduced the reliability of that system. Because of the impacts to all of our sources, each of these sources becomes very important to the long-term water supply of the City.

All of the water service connections that are located within the Chorro Valley receive water from a single pumping line as demonstrated in the Attachment No. 2. When the City's wells in the Ashurst and Romero well fields are operating, water from these wells blends in this line and then is used by these customers prior to being transported to the King's tank to blend with water from other sources. When only one well from the Ashurst well field blends with the water from the Romero well it can still meet the nitrate standards, but when more than one Ashurst well is running then the blended water will likely exceed the nitrate limits. When the Chorro Valley wells are not operating, these customers outside of the City limits receive the same blend of water as all other customers within the City limits, which consistently meet drinking water standards. The wells in the Chorro Valley have permit conditions that currently limit their use as a year round source.

At the time that these connections were made, the water quality in the Chorro Groundwater Basin was considered safe for drinking and met the State and Federal regulations governing water quality. In the last decade water quality has deteriorated in the basin while a number of new Federal regulations have come into effect governing water supplies.

DISCUSSION:

Because of the degradation to the water quality and the changes in regulations, the City no longer has the ability to both maintain the pumping of wells in the Chorro Groundwater Basin while providing water to customers in the basin that meets all State and Federal standards. In order to both provide water to the customers outside the City limits and maintain the Chorro Groundwater resource for the benefit of the customers within the City limits, major modifications to the City's infrastructure would be required. These modifications would be needed to effectively deal with the nitrate contamination while also providing disinfection of the occasional bacteriological contamination events that impact the Chorro Groundwater Basin.

Exhibit 6 A-3-MRB-11-001 255 of 363



Exhibit 6 A-3-MRB-11-001 256 of 363 4- Disconnect Customers Outside of the City Limits: Disconnect customers outside of the City limits from the pumping line. The benefit of removing water services from the pumping line is that blending and disinfection can occur within the pumping line prior to being introduced at the Kings tanks. This will enable a blended and disinfected product to be introduced at the Kings tanks and will protect the City from the liability of providing minimally treated well water to customers who currently are connected to a pumping line. This alternative can be pursued in conjunction with the second alternative or individually. Costs for this alternative are difficult to estimate but are likely to be an order of magnitude less than the other alternatives. This alternative is consistent with Section 13.14.040 of the Municipal Code, which limits the City's liability to provide water outside of the City limits.

Regardless of the direction provided, the degradation of water quality in the Chorro Valley, coupled with the connection of water services to the pumping line, and further complicated by more stringent regulations, will continue to strain the City's water resources until resolved. Staff is requesting that the Council rescind previous direction designating properties outside the City limits for water service. Staff will then negotiate the terms of removal of service with the impacted property owners, in accordance with any existing agreements, and for the benefit of the residents of the City of Morro Bay.

CONCLUSION:

It is recommended that the City Council review the Policy for providing water service outside of the City limits and provide direction to Staff on whether or not to continue to provide water services outside of the City limits.

Exhibit 6 A-3-MRB-11-001 257 of 363

Attachment No. 1

Water Accounts Outside of the City Limits by Account Number

(Addresses have been removed to protect the identity of the account holders)

 Account # 78000130- Chorro Creek Road – Service began March 7th 1995 - Water service to this parcel was provided according to the terms of the agreement dated August 10th 1982 that enables the City of Morro Bay to utilize well 9A. This agreement was between the City and a corporation that previously owned the land and may be terminated in accordance with the terms and conditions of that agreement. Termination of this agreement will result in the loss of well # 9A as a water resource for the City, and the City will recover the use of a boat slip on the Embarcadero. The current property owner pays for water consumed per the terms of the agreement.

2. Account # 78000120- Chorro Creek Road - Service began March 1st 1987 - Water service to this parcel was provided according to the terms of the agreement dated August 10th 1982 that enables the City of Morro Bay to well 9A. This agreement is between the City and a corporation that owns the land and may be terminated in accordance with the terms and conditions of that agreement. Termination of this agreement will result in the loss of well # 9A as a water resource for the City, and the City will recover the use of a boat slip on the Embarcadero. Water is provided free of charge to the current property owner.

3. Account # 78000100 - Chorro Creek Road - Service began August 18th 1986 - Water service to this parcel does not appear to be covered by any agreement. The current property owner pays for water consumed.

4. Account # 78000950 - Canet Road - Service began August 1998 - Water service to this parcel was granted as part of an agreement for the use of and easements to well # 8 dated March 5th 1975. The City abandoned the easements and the use of well #8 in 1997 and informed the property owners that service would be disconnected on July 1, 1998. The current property owner pays for water consumed.

5. Account # 78001000 - Canet Road - Service began August 1998 - Water service to this parcel was part of an agreement for an access and pipeline easement to the Romero well field parcel dated November 14th 1967. This easement is in use by the City of Morro Bay. This agreement terminates when the City no longer owns the Romero well field parcel. The current property owner pays for water consumed above a threshold per the terms of the agreement.

 Account # 78000900 - Chorro Creek Road - Service began August 1998 - Water service to this parcel does not appear to be covered by any agreement, although an investigation of the City's records did turn up a letter dated March 22, 1978 discussing various options for

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Exhibit 6 A-3-MRB-11-001 258 of 363 an agreement. The current property owner does not pay for water consumed per the historical practice.

7. Account # 15001100 - Adobe Road - Service began July 9th 1968. Water service to this parcel began with an application for service dated June 4th 1964. Water was provided at the rate for services outside the City limits until a letter dated September 11th 1972 modified the account to pay the same rate for service as the water users within the City limits in recognition of an agreement that previously existed for well #8. The current property owner pays for water consumed.

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- 8. Account # 15001050 Adobe Road Service began January 1st 1965. Water service to this parcel does not appear to be covered by any agreement. The current property owner pays for water consumed.
- Account # 78000050 Chorro Creek Road Service began January 1996 Water service to this parcel does not appear to be covered by any agreement. The current property owner pays for water consumed.
 - 10.Account #78000850 Quintana Road Service began October 18th 1993 Water service was granted to this parcel by City Council action on January 27th 1970. The current property owner pays for water consumed.
 - 11.Account # 15000970 Quintana Road Service began October 16th 1988 Emergency water service was granted to this parcel by City Council action. Water service has been inactive since 1992.

12.Account # 15001300 - Ranch Road - Service began January 1st 1984 - Water service to this parcel does not appear to be covered by any agreement. The current property owner pays for water consumed.

6

AGENDA NO: A-1

MINUTES - MORRO BAY CITY COUNCIL CLOSED SESSION – SEPTEMBER 28, 2009 CITY HALL CONFERENCE ROOM – 4:45 P.M.

MEETING DATE: 10/26/09

Mayor Peters called the meeting to order at 4:45 p.m.

PRESENT:	Janice Peters	Mayor
	Carla Borchard	Councilmember
	Rick Grantham	Councilmember
	Noah Smukler	Councilmember
	Betty Winholtz	Councilmember
STAFF:	Andrea Lueker	City Manager
	Robert Schultz	City Attorney

CLOSED SESSION

MOTION: Councilmember Grantham moved the meeting be adjourned to Closed Session. The motion was seconded by Councilmember Smukler and unanimously carried. (5-0)

Mayor Peters read the Closed Session Statement.

CS-1 <u>GOVERNMENT</u> <u>CODE</u> <u>SECTION</u> <u>54956.8</u>; <u>REAL</u> <u>PROPERTY</u> <u>TRANSACTIONS</u>: Instructing City's real property negotiator regarding the price and terms of payment for the purchase, sale, exchange, or lease of real property.

Property: 781 Market Street and the Corner of Pacific Street and Market Street. Negotiating Parties: George Salwasser and the City of Morro Bay. Negotiations: Purchase and Sale Conditions.

The meeting adjourned to Closed Session at 4:45 p.m. and returned to regular session at 5:20 p.m.

MOTION: Councilmember Winholtz moved the meeting be adjourned. The motion was seconded by Councilmember Borchard and unanimously carried. (5-0)

The meeting adjourned at 5:20 p.m.

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Exhibit 6 A-3-MRB-11-001 260 of 363

MINUTES - MORRO BAY CITY COUNCIL REGULAR MEETING – SEPTEMBER 28, 2009 VETERANS MEMORIAL HALL - 6:00 P.M.

Mayor Peters called the meeting to order at 6:07 p.m.

PRESENT:	Janice Peters	Mayor
	Carla Borchard	Councilmember
	Rick Grantham	Councilmember
	Noah Smukler	Councilmember
	Betty Winholtz	Councilmember
STAFF:	Andrea Lueker	City Manager
	Robert Schultz	City Attorney
	Bridgett Bauer	City Clerk
	Rick Algert	Harbor Director
	Bruce Ambo	Public Services Director
	John DeRohan	Police Chief
	George Rees	Fire Captain
	Susan Slayton	Administrative Services Director
	Dylan Wade	Utilities/Capital Projects Manager

ESTABLISH QUORUM AND CALL TO ORDER MOMENT OF SILENCE PLEDGE OF ALLEGIANCE MAYOR AND COUNCIL MEMBERS REPORTS, ANNOUNCEMENTS & PRESENTATIONS CLOSED SESSION REPORT - City Attorney Robert Schultz reported the City Council met in Closed Session, and no reportable action under the Brown Act was taken.

PUBLIC COMMENT

Keith Taylor expressed thanks to the community who supported Measure Q and who made it possible to receive the Fire Act Grant.

Hunter Kilpatrick announced the 28th Annual Harbor Festival would be held on October 3rd and 4th, and reviewed this year's events.

Gary Hixson stated he is going to have a television show on Channel 2, and addressed a variety of issues.

John Jones stated he filed a complaint with the State Water Resources Control Board for non-compliance against the City on decision 1633. He said in 1995, the City received a decision to appropriate water to outside the City limits, and had two years to comply with placing flow meters within the creek. Mr. Jones stated the City has never placed the flow meters in the creek and it was done by a biologist who said it needed to be done for the betterment of the fish and the public good. He requested the City comply with decision 1633, which would be in the City's best interest.

Exhibit 6 A-3-MRB-11-001 261 of 363

MINUTES - MORRO BAY CITY COUNCIL REGULAR MEETING – SEPTEMBER 28, 2009

Jack McCurdy addressed Item C-2 (Continued Discussion On State Water Resources Control Board Once-Through Cooling Statewide Policy) and the draft letter attached to the staff report. He said this policy is very important and will affect the community of Morro Bay directly. Mr. McCurdy stated the policy is vague and flawed, and the comments from the City to the State Board are commendable with appropriate points. He said CAPE will submit their comments to the Board. Mr. McCurdy also remembered Joe Giannini who recently passed away.

Tammie Haas, 4H Club, announced October 4-10 is "National 4-H Week". She reviewed the benefits of being a 4-H member and noted the local club meets the first Tuesday of each month at the Grange Hall on Highway 41.

Mayor Peters closed the hearing for public comment.

Mayor Peters called for a break at 7:02 p.m.; the meeting resumed at 7:09 p.m.

A. <u>CONSENT CALENDAR</u>

Unless an item is pulled for separate action by the City Council, the following actions are approved without discussion.

A-1 RESOLUTION NO. 49-09 APPROVING THE FORM OF AND AUTHORIZING THE EXECUTION AND DELIVERY OF A PURCHASE AND SALE AGREEMENT AND RELATED DOCUMENTS WITH RESPECT TO THE SALE OF THE SELLER'S PROPOSITION 1A RECEIVABLE FROM THE STATE; AND DIRECTING AND AUTHORIZING CERTAIN OTHER ACTIONS IN CONNECTION THEREWITH; (ADMINISTRATIVE SERVICES)

RECOMMENDATION: Adopt Resolution No. 49-09.

A-2 PROCLAMATION DECLARING OCTOBER 2009 AS RIDSHARE MONTH"; (PUBLIC SERVICES)

RECOMMENDATION: Adopt Proclamation.

A-3 STATUS REPORT ON APPLICATIONS FOR ECONOMIC STIMULUS FUNDING; (ADMINISTRATION)

RECOMMENDATION: Accept the status report for file.

Councilmember Winholtz pulled Item A-1 from the Consent Calendar for public information.

MINUTES - MORRO BAY CITY COUNCIL **REGULAR MEETING - SEPTEMBER 28, 2009**

Councilmember Smukler stated at the Air Pollution Control Board meeting, they voted to send a letter in support of SB 67 (California: Property tax revenues: Proposition 1A receivables), and he recommended the City do the same.

Councilmember Smukler moved the City Council approve Resolution No. MOTION: 49-09; and, direct staff to submit a letter in support of Senate Bill 67 declaring the City's intent to participate in the program and the City's thankfulness for the ability to retain those funds in a short-term manner. The motion was seconded by Councilmember Winholtz and carried unanimously. (5-0)

Mayor Peters pulled Item A-2 from the Consent Calendar to make a presentation.

- MOTION: Councilmember Borchard moved the City Council approve Item A-2 of the Consent Calendar. The motion was seconded by Councilmember Winholtz and carried unanimously. (5-0)
- MOTION: Councilmember Winholtz moved the City Council approve Item A-3 of the Consent Calendar. The motion was seconded by Councilmember Borchard and carried unanimously. (5-0)
- B. PUBLIC HEARINGS, REPORTS & APPEARANCES

POLICY DISCUSSION ON WATER SERVICES OUTSIDE OF CITY LIMITS; **B-1** (PUBLIC SERVICES)

Utilities/Capital Projects Manager Dylan Wade stated the City of Morro Bay's Municipal Code indicates, "The City will furnish water service in accordance with the regulations contained in this chapter and in accordance with other applicable ordinances, to any property within the City limits and to such areas outside the City limits as the Council may designate." From time to time since the incorporation of the City, water meters and water services have been provided to customers outside of the City limits. Some of these connections were made following the procedure outlined in the Municipal Code with a designation by Council while others were made in order to secure access or water for the City. There are others that have no available records pertaining to their connection. Currently, the City has water service at twelve locations outside of the City limits. Because of the degradation to the water quality and the changes in regulations, the City no longer has the ability to both maintain the pumping of wells in the Chorro Groundwater Basin while providing water to customers in the basin that meets all State and Federal standards. In order to both provide water to the customers outside the City limits and maintain the Chorro Groundwater resource for the benefit of the customers within the City limits, major modifications to the City's infrastructure would be required. These modifications would be needed to effectively deal with the nitrate contamination while also providing disinfection of the occasional bacteriological contamination events

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Exhibit 6 A-3-MRB-11-001 263 of 363

MINUTES - MORRO BAY CITY COUNCIL REGULAR MEETING – SEPTEMBER 28, 2009

that impacts the Chorro Groundwater Basin. The degradation of water quality in the Chorro Valley, coupled with the connection of water services to the pumping line, and further complicated by more stringent regulations, will continue to strain the City's water resources until resolved. Mr. Wade recommended the City Council review the policy for providing water service outside of the City limits, and direct staff on whether to continue to provide water services outside of the City limits.

Mayor Peters opened the hearing for public comment.

The following people expressed the importance of the City maintaining a water source in the Chorro Valley: Russ Banner, Bill Martony, Millie Benson, Mike Burton, Scott Young, Carrie Burton, Vera Peirce, Dustin Lamone, Tammie Haas, Barbara Doerr, Edward Peirce, and Connie Papin.

Mayor Peters closed the public comment hearing.

Councilmember Grantham stated the City is years away from being able to afford a plant that will provide tertiary affluent and in the absence of State and Federal grants it will be years before the City will have the money to invest in reclamation, which is also very expensive. He said with the new groundwater rule and increased regulations, quality of water and degradation of the City's water supply, which the City is trying to mitigate, the sphere of influence and annexation of properties would not come close to taking care of the proposed solutions. Councilmember Grantham stated when it is said that the City cannot guarantee clean and safe water for its citizens in its current situation he has to look at his responsibility to the citizens of Morro Bay.

Councilmember Winholtz stated the City has spent \$1-2 million on the desalination plant to remove brackish water from the Morro Valley; why would the expense of \$1 million from the water fund on the Chorro Valley seem so outrageous. She said she would prefer not to make a decision tonight.

Councilmember Smukler stated this is a complex issue and a decision should not be made tonight. He said he would like to begin conversations that include the major stakeholders, i.e. the San Luis Obispo County Regional Water Quality Control Board, State Water Quality Control Board and the National Estuary Program.

Councilmember Borchard stated she would like staff to start working towards taking the next steps in the process.

Mayor Peters stated discussions need to take place on the options presented by staff.

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Exhibit 6 A-3-MRB-11-001 264 of 363

MINUTES - MORRO BAY CITY COUNCIL REGULAR MEETING – SEPTEMBER 28, 2009

MOTION: Councilmember Winholtz moved the City Council direct staff to begin conversations with the property owners of the Chorro Valley regarding their source of water; and return to Council to discuss a source of water with disconnection as a potential. The motion was seconded by Councilmember Smukler.

Councilmember Winholtz, Councilmember Smukler and Councilmember Borchard requested the public comment period be reopened.

Mayor Peters opened the hearing for public comment.

The following people reiterated the importance of the City maintaining a water source in the Chorro Valley: Scott Young, Bob Doerr, Carrie Burton, Bill Martony, Russ Banner, and Barbara Doerr.

Mayor Peters closed the public comment hearing.

VOTE: The motion carried unanimously. (5-0)

MOTION: Councilmember Smukler moved, as part of these conversations, the City Council include the stakeholders of the National Estuary Program, San Luis Obispo County Regional Water Quality Control Board and State Water Quality Control Board with a notice of the City's conversations and existing situation, and that we elude to our intent for future discussions about decision 1633 and collaborative actions to address the water quality issue in the Chorro Basin. The motion was seconded by Councilmember Winholtz and carried unanimously. (5-0)

Mayor Peters called for a break at 8:50 p.m.; the meeting resumed at 8:58 p.m.

- C. <u>UNFINISHED BUSINESS</u>
- C-1 RESOLUTION DETAILING STRATEGIES TO PREVENT AND REDUCE VACANCIES ON THE EMBARCADERO AND TO STIMULATE BUSINESS; (HARBOR)

Harbor Director Rick Algert stated at the September 14, 2009 meeting, the City Council reviewed a report on City Tidelands leases, revenues and rental structures and considered a similar resolution. The City Council directed staff that changes are made to the previous resolution to allow office uses with no time limit on second floor spaces only and to set fiscal year 09/10 minimum annual rents at the same amount as they were in fiscal year 08/09, effectively waiving Consumer Price Index increases in fiscal year 09/10. Leases that were due for their five-year adjustment in 09/10 based on either 75% of the total annual rent paid in the last five years or 8% of the appraised amount of the

Exhibit 6 A-3-MRB-11-001 265 of 363



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NORROW PLAN	least disclosed	AGENDA NO: MEETING DATE:	1/14/10
	Staff Repor	t	

TO: Honorable Mayor and City Council

FROM: Rob Schultz, City Attorney

DATE: January 5, 2010

SUBJECT: Termination of Agreement between Roandoak and the City of Morro Bay

RECOMMENDATION:

It is recommended that the City Council review the Agreement between Roandoak and the City of Morro Bay and direct Staff to terminate the Agreement.

MOTION: I move that we direct Staff to terminate the Agreement between Roandoak and the City of Morro Bay pursuant to Paragraph 9 of the Agreement.

FISCAL IMPACT:

If the Council terminates the agreement with Roandoak, then Staff will begin to negotiate the terms of removal of water service with the two impacted property owners. If there is any fiscal impact for removal of service with the two impacted property owners, Staff would return to Council for approval.

BACKGROUND:

The City entered into the attached agreement with Roandoak of God in 1982. Paragraph 1 of the agreement grants to the City of Morro Bay the right to extract water from Well No. 9A. In exchange for the use of well 9A, Paragraph 6 of the Agreement requires the City to provide free water service, in an amount not to 1,100,000 gallons per month, to three parcels described in the agreement. The Agreement provides that if any of the parcels are sold, the City will continue to provide water in the amount not to exceed 500,000 gallons and the City shall be entitled to pumping costs for water used. In addition, Paragraphs 4 and 5 of the Agreement provide Roandoak with the use of a boat slip on the Embarcadero and use of approximately five acres owned by the City in the Chorro Valley. Paragraph 9 of the agreement allows the City to terminate the agreement. Termination of the agreement will result in the loss of Well No. 9A as a water resource for the City. The City would no longer be required to provide water to the three parcels, and the City will recover the use of a boat slip on the Embarcadero and use of the five acres in the Cotror Valley.

-US -> = to \$87,000 per year if we had known this was in place plus intity water -now we stand to lose both **Dept Review:** Prepared By: City Manager Review: City Attorney Review: & other parts in lease did get all componentim »Ferms met we did not. and PEXhibit, 6 1 207 01 363 rlm

DISCUSSION:

Because of the degradation to the water quality and the changes in regulations, the City no longer has the ability to both maintain the pumping of wells in the Chorro Groundwater Basin as well as provide water that meets all State and Federal standards to customers in the basin. In order to both provide water to the customers outside the City limits and maintain the Chorro Groundwater resource for the benefit of the customers within the City limits, major modifications to the City's infrastructure would be required. These modifications would be needed to effectively deal with the nitrate contamination while also providing disinfection of the occasional bacteriological contamination events that impact the Chorro Groundwater Basin.

In December of 2008, the California Department of Public Health inactivated all of the wells in the Ashurst well field including Well No. 9A. Until a method of providing treatment for nitrate removal or blending is in place, the City is unable to use this well as a supply source. Therefore, since Well No. 9A can no longer serve the purpose of municipal water supply without major modifications to the City's infrastructure, Staff is comfortable relinquishing control of that well at this time.

The degradation of water quality in the Chorro Valley, coupled with the connection of water services to the pumping line, and further complicated by more stringent regulations, will continue to strain the City's water resources until resolved. Staff is requesting that the Council begin the process by terminating the agreement with Roandoak. Staff will then negotiate the terms of removal of service with the impacted property owners, in accordance with any existing agreements, and for the benefit of the residents of the City of Morro Bay.

CONCLUSION:

It is recommended that the City Council review the Agreement between Roandoak and the City of Morro Bay and direct Staff to terminate the Agreement.

Dylan Wade - Re: Fw: Coastal Well Permit Conditions - Roandoak Permit

From:	Dylan Wade	X	Cita	+ County
To:	ttomlinson@co.slo.ca.us		0	0 i t
Date:	9/20/2011 4:42 PM			Involved -
Subject:	Re: Fw: Coastal Well Permit Conditions	- Roandoa	k Permit	

Tom

We will be reviewing the document you sent over and working on a reply. We want to make sure that the City and the County are on the same page in regards to how to proceed because we anticipate that this will be the first of many of these wells.

One quick question comes to mind. Can you provide a map or legal description or definition of where the Coastal Zone Boundary is in the Chorro Basin?

Thank you for your assistance in this matter.

Dylan Wade, P.E. Utilities/Capital Projects Manager City of Morro Bay 805-772-6261 phone 805-772-6268 fax >>> <ttomlinson@co.slo.ca.us> 9/16/2011 9:40 AM >>>

Subject: Well Permit Application 2011-003

As detailed in the attached addendum, well permit requests in the San Luis Obispo County Coastal Zone may require participation in the County well monitoring program. It has been determined that the well owner will be required to participate. See the requirements on the attachment. If you have questions about the implementation of these requirements please contact Sylas Cranor at 805 781-5260. Please return the completed consent authorization (enclosed) so that we may complete your well permit authorization. The property owner (Roandoak of God) is also being required to sign this Consent Authorization. You may fax the completed forms to me at 805 781-1229 or email me a signed PDF copy.

Tim Tomlinson 805 781-5271

"Pale ink," said Confucius, "is better than the most retentive memory."

----- Forwarded by Tim Tomlinson/PubWorks/COSLO on 09/16/2011 09:32 AM

(See attached file: 20110621 Conditions for Well Permit Application (Permit No. 2011-003).doc)

[Scanned @co.slo.ca.us]

Dylan Wade - Re: Confirming Date & Time for Chorro Creek Water Meeting

From:	Dylan Wade		
То:	Dana Swanson; dbenedix@co.slo.ca.us		
Date:	10/13/2011 5:50 PM		
Subject:	Re: Confirming Date & Time for Chorro Creek Water Meeting		
CC:	Art Trinidade; Erik Ustin; Joseph Goodwin; Matt Janswsen; Nancy Orto		

County staff

JL-

The City would like to keep this meeting scheduled to discuss the following topics:

1- The water well proposal for 445 Chorro Creek (Roanoak or Joseph Goodwin well) and the county's conditions of approval.

2- The possibility of a waiver of well drilling standards for 465 Chorro Creek Road (Eric Ustin) due to the size of the parcel.

3- The City's strategy in disconnecting the few remaining water service customers outside the City limit and what conditions of approval may be required on other wells in the basin.

City staff would offer to pre-meet with County staff and proposes that we discuss items 1 and 2 above only with the relevant property owners. We would ask either Erik or Joseph to wait outside as the other's property was discussed. The City sees both County Planning and Public Health staff as essential to the meeting.

We share Public Work's opinion that they probably do not need to attend. The City will send specific written comments regarding future monitoring efforts in the groundwater basin. We are confident that the City can resolve the issue of monitoring to everyone's satisfaction.

In regards to Code Enforcement staff, the City does not see a need to have them present unless the County believes that any outstanding code enforcement issues are relevant to the water supply discussion in which case we would be happy to have them attend.

In conclusion, the City staff attending (myself and Rob Schultz) believe that this will be a productive, informative and upbeat conversation about the City and private citizen's current water supply issues in the Chorro Basin. If is more convenient we would offer to change the venue to somewhere at the county. Please confirm that you can attend this discussion as Dana will continue to try and pull this together.

I thank you in advance for your time and efforts in resolving the water issues in the Chorro valley.

Dylan Wade, P.E. Utilities/Capital Projects Manager City of Morro Bay 805-772-6261 phone 805-772-6268 fax >>> <dbenedix@co.slo.ca.us> 10/13/2011 2:49 PM >>> Please hold off on scheduling this meeting, as we need to confer with Dylan and others on scope, content, & background. Thanks Rob Schultz - Re: Fw: Coastal Well Permit Conditions - Roandoak Permit

From:	<mjanssen@co.slo.ca.us></mjanssen@co.slo.ca.us>
To:	"Dylan Wade" <dwade@morro-bay.ca.us></dwade@morro-bay.ca.us>
Date:	11/30/2011 3:37 PM
Subject:	Re: Fw: Coastal Well Permit Conditions - Roandoak Permit
CC:	<norton@co.slo.ca.us>, <rlichtenfels@co.slo.ca.us>, "Rob Schultz" <rschu< th=""></rschu<></rlichtenfels@co.slo.ca.us></norton@co.slo.ca.us>

Dylan:

+

Thanks for letting us see the RFP first.

I don't have any comments, but then again I would think the most substantive comments might be coming from Tim and/or Rich.

Matt

From:	"Dylan Wade" <dwade@morro-bay.ca.us></dwade@morro-bay.ca.us>
To:	<ttomlinson@co.slo.ca.us></ttomlinson@co.slo.ca.us>
Cc:	<mjanssen@co.slo.ca.us>, <norton@co.slo.ca.us>, <rlichtenfels@co.slo.ca.us>, "Rob Schultz" <rschultz@morro-bay.ca.us></rschultz@morro-bay.ca.us></rlichtenfels@co.slo.ca.us></norton@co.slo.ca.us></mjanssen@co.slo.ca.us>
Date:	11/28/2011 11:08 AM
Subject	Re: Fw: Coastal Well Permit Conditions - Roandoak Permit

Tim, Matt, Nancy, Rich

Attached please find the RFP for the geotechnical investigation requested as a condition on the Goodwin well. This has been written to cover the whole Chorro Groundwater basin in anticipation of drilling wells on other parcels in the future.

Please provide any comments on the RFP content to help ensure that the finished report meets your expectations. Feel free to forward this to anyone else in your organization who needs to review it. Your response by Monday December 5th would be greatly appreciated.

Thank you

Dylan Wade, P.E. Utilities/Capital Projects Manager City of Morro Bay 805-772-6261 phone 805-772-6268 fax >>> <ttomlinson@co.slo.ca.us> 9/16/2011 9:40 AM >>> Subject: Well Permit Application 2011-003

As detailed in the attached addendum, well permit requests in the San Luis Obispo County Coastal Zone may require participation in the County well monitoring program. It has been determined that the well owner will be required to participate. See the requirements on the attachment. If you have questions about the implementation of these requirements please contact Sylas Cranor at 805 781-5260. Please return the completed consent authorization (enclosed) so that we may complete your well permit authorization. The property owner (Roandoak of God) is also being required to sign this Consent Authorization. You may fax the completed forms to me at 805 781-1229 or email me a signed PDF copy.

Tim Tomlinson 805 781-5271

"Pale ink," said Confucius, "is better than the most retentive memory."

----- Forwarded by Tim Tomlinson/PubWorks/COSLO on 09/16/2011 09:32 AM

(See attached file: 20110621 Conditions for Well Permit Application (Permit No. 2011-003).doc)

[Scanned @co.slo.ca.us] [attachment "RFPforgeotechnicalinvestigation.doc" deleted by Matt Janssen/Planning/COSLO]

[Scanned @co.slo.ca.us]





Morro Bay, CA 93442 • 805-772-6200

Request for Proposals for

Professional Services by State Certified Engineering Geologist, Hydrogeologist, or Registered Geologist for ground water well development studies in the Chorro Valley.

NOTICE IS HEREBY GIVEN THAT the City of Morro Bay, State of California, will receive proposals from firms desiring to perform consulting services necessary to create a report regarding the development of wells in the Chorro groundwater Basin and inspection of the wells constructed in accordance with this report. The City must receive all proposals by 3:00 p.m. on Thursday, January 5, 2012.

The City will not consider proposals received after said time. Submit proposals to the Morro Bay City Clerk, 595 Harbor Street, Morro Bay, CA 93442 in a sealed envelope plainly marked with the proposal title, consultant name and address, and time and date of the proposal opening.

This Request for Proposals is available on-line at the City's web site: <u>www.morro-bay.ca.us</u> for viewing and downloading.

General Work Description:

1. Prepare a report to guide the well drilling construction process so as to maximize the ability of the propose well to provide the least contaminated water, not just for nitrate, but for all the primary drinking water constituents by sealing off undesirable strata and to avoiding potentially contaminating stratified aquifers. This report will cover eight potential well sites in the Chorro groundwater Basin.

2. Include in the report, recommendations indicating the optimum depth of the wells, well screens, and annular seals; and

3. Observe construction of up to eight wells and certify that the wells were constructed in consistent with the recommendations found in the report and the actual conditions observed in the field.

For additional information, contact Dylan Wade, Utilities/Capital Projects Manager, in the Morro Bay Public Services Department at 805.772.6564.

DESCRIPTION OF WORK

1. INTRODUCTION

The City of Morro Bay has historically provided ground water to a series of customers outside the City limits from two well fields in the Chorro Basin. The Ashurst well field is located West of Highway 1 in the vicinity of Chorro Creek Road. The Romero well field is West of Highway 1 and proximate to the western terminus of Canet Road.

Page 1 of 23

Over the last several years these well fields have experienced periodic episodes of both nitrate and bacteriological contamination. This contamination coupled with increasingly stringent water quality regulations is rendering this practice obsolete.

2. GENERAL PROJECT DESCRIPTION

In order to retain the use of the well fields as a source of supply for the residents of Morro Bay, the City is working with the property owners in the basin to disconnect them from the system. The City is offering to drill wells and provide a treatment system for these water customers outside the City limits as a replacement source for the water from the City well fields.

The County of San Luis Obispo has conditioned the owner of the first property where a well is proposed to develop a report under the supervision of a geologist prior to constructing a well. This will likely be requested from the subsequent properties as well and is amenable to having these reports combined into a single document.

Project Budget: There has been no allocation of funding as of this writing. Fund allocation is proposed to occur simultaneously with award of this contract. The City contemplates a preliminary construction cost of approximately twenty five thousand for the well construction project at each site where a well and treatment system is required. It is anticipated that compensation for this contract will be commensurate to industry standard fees for a project of this scope.

3. SCOPE OF CONSULTANT SERVICES

The City intends to hire a qualified consultant or consultant team to provide the following services and products:

1.Prepare a report to guide the well drilling construction process so as to maximize the ability of the propose well to provide the least contaminated water, not just for nitrate, but for all the primary drinking water constituents by sealing off undesirable strata and to avoiding potentially contaminating stratified aquifers. This report will cover eight potential well sites in the Chorro groundwater Basin.

2. Include in the report, recommendations indicating the optimum depth of the wells, well screens, and annular seals; and

3. Observe construction of up to eight wells and certify that the wells were constructed in consistent with the recommendations found in the report and the actual conditions observed in the field.

 Respond to report review comments by the County of San Luis Obispo, the City of Morro Bay, and impacted property owners in order to make any necessary corrections to the report.

4. MATERIALS AND INFORMATION TO BE PROVIDED BY CITY

The City will provide the following information to the Consultant:

- · Copies of Ahsurst Nitrate Study delineating the sources of nitrate in the Ashurst well field.
- Copies of all plans, drawings, exhibits and similar documents in the City's possession relating to previous work performed in the groundwater basin.
- As needed, available aerial photographs
- As needed, available topographic maps

Page 2 of 23

5. INTENDED USE OF CONSULTANT'S WORK

The City of Morro Bay intends to use the Consultant's work product to construct a series of water supply wells to individual parcels in the Chorro groundwater basin.

GENERAL TERMS AND CONDITIONS

PROPOSAL REQUIREMENTS

- Requirement to Meet All Provisions. Each individual or firm submitting a proposal shall meet all of the terms, and conditions of the Request for Proposals (RFP) specifications package. By virtue of its proposal submittal, proposing consultant acknowledges agreement with and acceptance of all provisions of the RFP specifications.
- 2. Proposal Submittal. Each proposal must be submitted on the form(s) provided in the specifications and accompanied by any other required submittals or supplemental materials. Enclose proposal documents in an envelope that is sealed and addressed to the Morro Bay City Clerk, 595 Harbor Street, Morro Bay, California, 93442. In order to guard against premature opening, clearly label the proposal with the proposal title, specification number, name of consultant, and date and time of proposal opening. The City will not accept FAX submittals.
- 3. Insurance Certificate. Each proposal must include a certificate of insurance showing:
 - a. The insurance carrier and its A.M. Best rating.
 - b. Scope of coverage and limits.
 - c. Deductibles and self-insured retention.

The purpose of this submittal is to generally assess the adequacy of the proposing consultant's insurance coverage during proposal evaluation; as discussed under paragraph 13 below, endorsements are not required until contract award.

- 4. Proposal Quotes. The Consultant shall provide a detailed estimate for the work proposed. The estimate shall show estimated hours for each task and the associated billing rate. This estimate will be used to judge level of proposed effort but will not be the basis of contract award.
- 5. Proposal Withdrawal and Opening. A proposing consultant may withdraw its proposal, without prejudice prior to the time specified for the proposal opening, by submitting a written request to the Director of Public Services for its withdrawal, in which event the proposal will be returned to the consultant unopened. The City will not consider proposals received after the time specified or at any place other than that stated in the "Notice Requesting Proposals." The City will open and declare all proposals in public. Proposals consultants or their representatives are invited to be present at the opening of the proposals.
- 6. Submittal of One Proposal Only. No individual or business entity of any kind shall be allowed to make or file, or to be interested in more than one proposal, except an alternative proposal when specifically requested; however, an individual or business entity which has submitted a sub-proposal to a proposing consultant submitting a proposal, or who has quoted prices on materials to such proposing consultant, is not thereby disqualified from submitting a sub-proposal or from quoting prices to other proposing consultants submitting proposals.
- 7. Cooperative Purchasing. During the term of the contract, the successful proposing consultant will extend all terms and conditions to any other local governmental agencies upon their request. These agencies will issue their own purchase orders, will directly receive goods or services at their place of business, and will be directly billed by the successful proposing consultant.
- 8. **Communications**. All timely requests for information submitted in writing will receive a written response from the City. The City does not encourage telephone communications with City staff but will allow them. However, any such oral communication shall not be
binding on the City. [Refer to this Request for Proposal's Special Terms and Conditions, Paragraph 7.]

9. Applicable Codes and Standards. The selected consultant shall perform all work in accordance with applicable codes and standards.

CONTRACT AWARD AND EXECUTION

- 10. Proposal Retention and Award. The City reserves the right to retain all proposals for a period of 60 days for examination and comparison. The City also reserves the right to waive non-substantial irregularities in any proposal, to reject any or all proposals, to reject or delete one part of a proposal and accept the other, except to the extent that proposals are qualified by specific limitations. The special terms and conditions of these specifications includes proposal evaluation and contract award criteria.
- 11. Competency and Responsibility of Proposing Consultant. The City reserves full discretion to determine the competence and responsibility, professionally and/or financially, of proposing consultants. Proposing consultants will provide, in a timely manner, all information that the City deems necessary to make such a decision.
- 12. **Contract Requirement**. The proposing consultant to whom award is made (Consultant) shall execute a written contract with the City within ten (10) calendar days after notice of the award has been sent by mail to it at the address given in its proposal. The contract shall be made in the form adopted by the City and incorporated in these specifications as Exhibit A.

The firm's Federal Tax I.D. number and a current City Business License will be required as conditions of payment of invoices.

- 13. **Insurance Requirements**. The Consultant shall provide endorsements of insurance in the form, coverages, and amounts specified in Exhibit "D" of these specifications within 10 (ten) calendar days after notice of contract award as a precondition to contract execution.
- 14. Business License. The Consultant must have a valid City of Morro Bay Business License prior to execution of the contract. Additional information regarding the City's Business License program is available at the City of Morro Bay City Hall at 595 Harbor Street, Morro Bay, CA, 93442, 805.772.6200.
- 15. Disadvantaged Business Enterprise (DBE) Program. The City encourages the use disadvantaged business enterprises in accordance with its DBE program.

CONTRACT PERFORMANCE

- 16. Ability to Perform. The Consultant warrants that it possesses, or has arranged through subcontracts, all capital and other equipment, labor, materials, and licenses necessary to carry out and complete the work hereunder in compliance with any and all federal, state, county, city, and special district laws, ordinances, and regulations.
- 17. Laws to be observed. The Consultant shall keep itself fully informed of and shall observe and comply with all applicable state and federal laws and county and City of Morro Bay ordinances, regulations and adopted codes during its performance of the work.
- 18. **Payment of Taxes**. The contract prices shall include full compensation for all taxes that the Consultant is required to pay.
- 19. Safety Provisions. The Consultant shall conform to the rules and regulations pertaining to safety established by OSHA and the California Division of Industrial Safety.
- 20. Public and Employee Safety. Whenever the Consultant's operations create a condition hazardous to the public or City employees, it shall, at its expense and without cost to the City, furnish, erect and maintain such fences, temporary railings, barricades, lights, signs and other devices and take such other protective measures as are necessary to prevent accidents or damage or injury to the public and employees.
- 21. Preservation of City Property. The Consultant shall provide and install suitable safeguards, approved by the City, to protect City property from injury or damage. If City property is injured or damaged as a result of the Consultant's operations, it shall be replaced

or restored at the Consultant's expense and to a condition as good as when the Consultant began work.

- 22. Consultant Non-Discrimination. In the performance of this work, the Consultant agrees that it will not engage in, nor permit such subconsultants as it may employ, to engage in discrimination in employment of persons because of age, race, color, sex, national origin or ancestry, sexual orientation, or religion of such persons.
- 23. Terms and Conditions of Contract: Attached to this Request for Proposals, as Exhibit "A", is the City's standard Agreement for Consultant Services. The successful firm will be required to enter into this contract and abide by all of its Terms and Conditions. As part of the Proposal, all firms shall specify and submit all conflicts with or exceptions to the Terms and conditions. The City will view all firms not submitting such conflicts or exceptions to be in agreement with all of the Terms and Conditions therein.

SPECIAL TERMS AND CONDITIONS - REQUEST FOR PROPOSALS

1. Proposal Content. Your proposal must include the following information:

a. Proposal submittal summary.

Qualifications

- Experience of your firm in performing similar services. Project understanding b. and examples of recent projects on which your firm has worked which you believe had similar issues as the proposed Project.
- Resumes of the individuals assigned to this project, including any sub-C. consultants.
- d. Name(s) and specific experience of the individual or individuals at your firm that you propose as Project Manager or other substantial roles;
- Standard hourly billing rates for the assigned staff, including any sub-consultants. e. Work Program

- Description of your approach to completing the work. f.
- Proposed schedule for completing the work, including estimated staff hours and g. Project milestones.
- Services or data to be provided by the City. h.
- Any other information that would assist us in making this contract award decision. i.

Submittal Forms

- Certificate of insurance. j.
- k. References from at least three agencies/firms for whom you have provided similar services (use form in proposal package).
- Statement and explanation of any instances regarding past governmental agency L bidding or contract disgualifications or removal from a project.

Compensation

- Proposed compensation and payment schedule tied to accomplishing key tasks. m. Proposal Length and Copies
- Submit five (5) copies of the proposal. n
- 2. Consultant Information. Proposing consultant shall submit a statement identifying contact information.

3. Proposal Evaluation and Selection. A review committee will evaluate proposals.

Written Proposal Review

- a. Understanding of the work required by the City and proposed compensation (10%).
- b. Quality, clarity, and responsiveness of the proposal (10%).
- c. Demonstrated competence and professional qualifications necessary for successfully performing the work required by the City (30%).
- d. Recent experience in successfully performing similar services (10%).
- f. References (10%).

g. Background and related experience of the specific individuals assigned to this project (15%).

h. Demonstrated ability to conform to City contract requirements (15%).

Contract award will be based on a combination of factors that represent the best overall value as determined by the City, including: the written proposal criteria described above; results of background and reference checks; and proposed compensation.

- Contract Award. Subject to the reservations set forth in Paragraph 10 of the General Terms and Conditions of these specifications, the City will award the contract to the most responsible, responsive proposing consultant.
- 5. Failure to Accept Contract. The following will occur if the proposing consultant to whom the award is made (Consultant) fails to enter into the contract: the award will be annulled; any bid security will be forfeited in accordance with the special terms and conditions if a proposing consultant's bond or security is required; and an award may be made to the next lowest responsible, responsive proposing consultant who shall fulfill every stipulation as if it were the party to whom the first award was made.
- Proposal Review and Award Schedule. The following is an outline of the anticipated schedule for proposal review and contract award:

1. Issue RFP	December 5, 2011
2. Receive proposals	January 5, 2011
3. Complete evaluation and staff recommendation	January 13, 2011
4. Award contract	January 24, 2011
5. Execute contract	February 3, 2011
6. Start work	February 6, 2011

- 7. Questions. Direct questions or information requests concerning this project to Dylan Wade, Utilities/Capital Projects Manager, City of Morro Bay Public Services Department, 955 Shasta Avenue, Morro Bay, CA, 93442, 805.772.6266, <u>dwade@morro-bay.ca.us</u> no later than 4 p.m. on Tuesday January 3, 2012. Questions received after this time and date will not receive responses. The City will forward all questions and responses to all proposal holders to assure no one firm gains a competitive advantage or suffers a competitive disadvantage. The Capital Projects Manager will strive to respond to questions within one working day of their receipt.
- 8. Ownership of Materials. All original drawings, plan documents, and other materials prepared by or in possession of the Consultant as part of the work or services under these specifications shall become the permanent property of the City. The consultant shall deliver any or all of these materials and documents to the City upon demand.
- 9. Release of Reports and Information. Any reports, information, data, or other material given to, prepared by or assembled by the Consultant as part of the work or services under these specifications shall be the property of City and shall not be made available to any individual or organization by the Consultant without the prior written approval of the City.
- 10. Copies of Reports and Information. If the City requests additional copies of reports, drawings, specifications, or any other material in addition to what the Consultant is required to furnish in limited quantities as part of the work or services under these specifications, the Consultant shall provide such additional copies as are requested, and City shall compensate the Consultant for the costs of duplicating of such copies at the Consultant's direct expense.

11. Required Deliverable Products. The Consultant will be required to provide:

- a. Administrative Draft Copy of the Report for review by the City and County
- b. Public Review Draft of the Report
- c. Final Report
- d. Certification of well construction.

The Consultant must provide five hard copies of each report as well as the corresponding electronic files to the City, compatible with the following programs unless

otherwise directed by the project manager: Microsoft Office Suite (Word, Excel, Publisher, and PowerPoint), AutoCADD, and Acrobat Reader. 15. Attendance at Meetings and Hearings. The Consultant shall attend a minimum of one (1) 2 hour meeting to present and discuss its draft findings and recommendations with the City and the County.

Perfect-Re: Government Code water and utilities is Clear Chorr... Page 1 of 8

From: Carrie Burton <carriemikeburton@aol.com>

To: dchurch <dchurch@slolafco.com>; bgibson <bgibson@co.slo.ca.us>; pogren <pogren@co.slo.ca.us>; mjanssen <mjanssen@co.slo.ca.us>; nnegranti

Cc: raybiering <raybiering@yahoo.com>; rschultz <rschultz@morro-bay.ca.us>; ALueker <ALueker@morrobay.ca.us>; rlichtenfels <rlichtenfels@co.slo.ca.us>

Bcc: lstedjee <lstedjee@charter.net>

Subject: Perfect-Re: Government Code water and utilities is Clear Chorro Valley

Date: Mon, Jan 9, 2012 3:44 pm

David-

Thank you, that's what I needed for the CCC complaint. I was advised that all mentioned agencies City, County and LAFCO will hold responsibility. Regardless of who "passes the buck". And yes, it will make a great story.

Carrie Burton

----Original Message----From: David Church <<u>dchurch@slolafco.com</u>> To: 'Carrie Burton' <<u>carriemikeburton@aol.com</u>>; bgibson <<u>bgibson@co.slo.ca.us</u>>; pogren <<u>pogren@co.slo.ca.us</u>>; mjanssen <<u>mjanssen@co.slo.ca.us</u>>; nnegranti <<u>nnegranti@co.slo.ca.us</u>> Cc: 'Raymond Biering' <<u>raybiering@yahoo.com</u>>; rschultz <<u>rschultz@morro-bay.ca.us</u>>; 'Andrea Lueker' <<u>ALueker@morro-bay.ca.us</u>> Sent: Mon, Jan 9, 2012 3:02 pm Subject: RE: Government Code water and utilities is Clear Chorro Valley

Dear Ms Burton;

A Municipal Service Review was prepared and adopted for the Sphere of Influence update for Morro Bay. It is found at our website www.slolafco.com. The 8-10 residences on Quintana Rd are acknowledged on page 2-11 and 2-26. As I have stated before; the City has served this area in past and is allowed to, at its discretion, continue its existing service regardless of being in or out of the Sphere. LAFCO cannot compel an agency to provide services to areas outside its boundaries. The best LAFCO can do in this situation is to allow the City to continue serving these residences that have been served in the past. That decision is up to the City. The 2007 Sphere of Influence Update acknowledged the residences in the area currently being served. There is no State Agency that oversees LAFCO's decision. Your recourse would be through the Courts.

Here is my previous response:

Dear Ms. Burton;

It appears from the 1995 letter from the City that it has been serving residents in this area since the City was incorporated (1964) even though the area is not within the City limits. LAFCO updated the City's Sphere of Influence in 2007 and the issue of the City serving these residences was not addressed. The area was removed from the City's Sphere of Influence, **but this action did not affect the City's existing service arrangements** with area residents since this area was already being served by the City. The City has discretion in providing the existing services to the residents of the area based on the past service provision.

Exhibit 6 A-3-MRB-11-001 http://mail.aol.com/35363-112/aol-6/en-us/mail/PrintMessage.aspx 1/285/26932





City of Morro Bay

southeast of the city limits in San Luis Obispo County. The Romero Well Field is the City's current point of diversion and is located about 2.5 miles The City of Morro Bay operates two well fields in the Chorro Valley. The Ashurst Well Field, which is currently inactive, is located about 0.5 miles southeast of the city limits in the county. Please refer to drawing W-2 for a detailed map of the well field and monitoring stream gages. From: rlichtenfels@co.slo.ca.us To: carriemikeburton@aol.com Subject: Re: more photos Date: Wed, Jan 5, 2011 12:20 pm

Good morning Carrie - The photos are certainly compelling and quite descriptive of the marginal soil conditions as drainage is obviously a problem and I suspect highest historical groundwater elevations are high enough to compromise septic system design parameters.

The photos and the local historical record suggest groundwater levels are likely within 5 feet of the bottom of the septic system leachline trenches, which if true, would not allow for sufficient soil depth filtration to treat the sewage effluent. If this is the case, then the septic system sewage is only getting partially treated as the leachfield trenches may be inundated with high groundwater. This scenario could allow partially treated sewage to migrate with the shallow groundwater away from the leachfield areas and possibly contaminate groundwater being pumped by local water wells.

From a public health protection viewpoint we are definitely concerned about this neighborhood and the surrounding environment. In addition to possible neighborhood groundwater contamination, I assume the local hydraulic gradient flows to Chorro Creek which empties into the Morro Bay Estuary. The estuary is already under quarantine for sport-harvested shellfish (as is the commercial harvesting) due to the estimated 50,000 gallon Cuesta College sewage spill a couple of weeks ago. Point being that partially treated sewage from your neighborhood could also be flowing to the creek and the bay.

Some of this is conjecture, as it would take some significant funding to do a complete scientific study to see what is really happening below ground with the local septic systems, with the groundwater and water wells. Like several unsewered areas within the county, development occurred long before septic system construction standards existed, and we are now seeing the painful results of sewage treatment and public water system infrastructure lagging behind development. Couple development ahead of infrastructure with dwindling federal funding of wastewater treatment plants and other public works projects and it gets problematic. Economy of scale makes it difficult to provide the needed public sewer and public water system

The proposal for a wastewater treatment plant in the Chorro Valley where hookup would be available to your neighborhood would certainly go along way to solving some of the problems. And then maybe public water service could be resumed. Hopefully that will go forward.

Rich

Richard J. Lichtenfels, R.E.H.S., M.P.H. Supervising Environmental Health Specialist County of San Luis Obispo Health Agency Public Health Department Environmental Health Services Division 2156 Sierra Way, P.O. Box 1489 San Luis Obispo CA 93406-1489 (805) 781-5553 Fax (805) 781-4211 Email Address: rlichten@co.slo.ca.us

From:	<u>carriemikeburton@acl.com</u>
To:	rlichtenfels@co.slo.ca.us
Date:	01/05/2011 11:03 AM

Subject: more photos

Here is more

Exhibit 6 A-3-MRB-11-001 283 of 363 3/8/2011

http://mail.aol.com/33356-111/aol-1/en-us/mail/PrintMessage.aspx

Alex Ruhland

From:Madeline CavalieriSent:Thursday, February 23, 2012 8:15 PMTo:Alex RuhlandSubject:FW: MB/Cayucos WWTP Issues

Could you please print this and add it to the file? Thanks!

From: Richard E.T. Sadowski [mailto:r.e.t.sadowski@gmail.com] Sent: Thu 2/23/2012 1:34 PM To: Madeline Cavalieri Subject: MB/Cayucos WWTP Issues

February 23, 2012

Dear Madeline:

The environmental issues surrounding the Morro Bay/ Cayucos Wastewater Treatment Plant (MB/CAY WWTP) construction must be addressed simultaneously and concurrently with the detrimental environmental affects caused by the poor condition of the sewer collection and conveyance systems.

An area of great concern is where HWY 41 and Hwy 1 intersect, this is where sewage from Cayucos and Morro Bay is entering the Morro Basin Aquifer on it's way to the WWTP westbound along HWY 41. The 2007 'Morro Basin Nitrate Study" Issues and Concerns Report points to sewage, leeching from dilapidated sewer infrastructure, as being the primary cause of the high nitrate readings in the Morro Basin Aquifer. Recently, well test data from the Morro Bay Mutual water wells has shown that this is likely the cause. The Morro Bay staff continues to ignore the scientific data and assert that the nitrates are migrating from farm operations in the Morro Valley.

It must be noted that while i was performing the sewer flow study for the Cayucos Sanitary District in 2003-2004, Wallace Engineering was contracted by the city of Morro Bay to perform their sewer flow study. The 2005 Sewer System Master Plan, as it was referred to, had several issues that i had brought up to local staff that were ignored. An environmental review on the collection system was never done, and subsequently a Neg. Dec. per CEQA was issued with the explanation that these environmental concerns would be addressed in the EIR for the MB/CAY WWTP. To date the environmental impacts from a dilapidated sewer infrastructure have not been addressed.

The MB/CAY WWTP project must concurrently address the relocation of the WWTP away from the flood and tsunami zone in essence addressing sea level rise (SLR) as well as water reclamation and the restoration of the Morro Basin drinking water aquifer. This action would require that the large sewer trunk lines near or in the aquifer be immediately replaced or repaired. It would make no sense to reclaim water and recharge an aquifer if the pollution entering that aquifer is not halted.

Another issue of concern is the need to address greenhouse gas emissions in the form of methane and H2S. The need to integrate these issues and concerns into a viable and plausible solution are essential to a successful and economically responsible project.

If you have any questions or comments, please contact me.

Respectfully; Richard E.T.Sadowski 805-772-2610

> Exhibit 6 A-3-MRB-11-001 284 of 363

Dear California Coastal Commissioners

I am writing in regard to newly-compiled evidence that points to the likelihood of long-term, ongoing contamination of the Morro Basin aquifer with sewage. Since the aquifer is connected to the ocean, this contamination is likely spreading far beyond the City of Morro Bay and doing serious harm throughout a significant area of the Coastal Zone.

Well water test data from California Public Health Department and City of Morro Bay files appears to indicate that, contrary to claims made by City officials, staff, and their paid consultant, nitrate contamination of the City's Morro Basin wells does not come primarily from fertilizer; it comes from sewage.

All of the Morro Basin wells are located in close proximity to one another, and all draw their water from the Morro Basin aquifer. Yet, nitrate levels in the four wells vary widely and consistently. If the nitrates were from agricultural activities to the east, in the Morro Valley, one would expect the nitrate levels in the wells to be the same, or very similar. The following chart shows the actual nitrate levels.



Well 3 is located closest to the alleged sewage source, followed, in order of distance from that source, by wells 4, 14 and 15. The sewage source is said to be a section of the jointly-owned Morro Bay-Cayucos Main Street trunk line that lies north of the intersection of Main Street and Highway 41. Video inspection evidence of the line shows it to be in a seriously-dilapidated state.

Attached is an article recently published in *Rock of the Coast*". It provides additional evidence, along with a history of the nitrate problems. I believe that the evidence presented is sufficient to warrant a new, independent look at the nitrate contamination problem, with all work done by persons outside of the control of the City of Morro Bay. I ask that you take whatever actions lie within your authority to ensure that this issue is thoroughly investigated.

Before I close, I would like to comment briefly on another serious Morro Bay issue. Recently, the City reactivated its contract with the lobbyist who was hired specifically to convince you that you should ignore the numerous concerns of your staff and of Morro Bay residents, and approve the City-sanctioned WWTP project.

I must ask what I consider a very important question: If this is such a great project, why do they think they need a lobbyist to convince you of that?

Thank you, as always, for your attention to the concerns of Morro Bay residents.

Sincerely,

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442

cc: Madeline Cavalieri

RECEIVED

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CALIFORNIA COASTAL COMMISSION CENTRAL COAST AREA

Exhibit 6 A-3-MRB-11-001 285 of 363

Written by Linda Stedjee Sunday, 12 February 2012 20:45

Rock Research: Leaking Sewage, Not Agriculture, May Be Source of Nitrate Problem in Morro Bay City Wells

In 2008, two Morro Bay residents challenged the Morro Basin Nitrate Study, a City-funded report that claimed that the nitrate contamination of the City's Morro Basin municipal wells was caused by fertilizer. The source of the fertilizer was said to be agricultural operations in the Morro Valley. The residents alleged that the study was wrong, and that the real source of the nitrates was sewage, leaking from the City's Main Street trunk line north of Highway 41.

In 2011, it was discovered that there were striking differences between nitrate levels in the City's Morro Basin wells and in a nearby well owned by Morro Bay Mutual Water. The wells all draw their water from the Morro Basin aquifer. The sites of the agricultural operations that were blamed for the nitrate problems are located over, and adjacent to portions of the aquifer that lie a considerable distance to the east of the wells.

The 2011 discovery raised questions. If the nitrates in the wells are from fertilizer why are the City and Morro Bay Mutual Water well nitrate levels so different? Shouldn't they be the same? After all, the wells get their water from the same source, the Morro Basin aguifer. The debate was renewed between those who believe the nitrates in City wells come from agriculture, and those who believe they come from sewage.

The Rock recently undertook a research project to look into the matter. The findings from that research appear to support the residents' position and contradict the City's.

Nitrate data was obtained from California Department of Public Health (CDPH) files and from laboratory reports in files held by the City. City well water production reports were also obtained. The data for 2009, 2010, 2011 and January 2012 was compiled and then graphed to show any patterns or trends.

The City's four Morro Basin wells, which are located adjacent to Lila Kaiser Park, are in fairly close proximity to one another. However, well test data for the past three years shows that the nitrate levels in the wells differ consistently and significantly. The well closest to the alleged source of leaking sewage had, with no exceptions, the highest nitrate levels. Levels for the remaining wells, which are farther from the source, were always lower.

The following graph shows the nitrate levels, by well, for the months of January 2011 through January 2012. Well 3 is closest to the alleged source of sewage. Well 4 is next in line, followed by well 14, and well 15, which is farthest away.



If the source of the nitrates were fertilizer from the Morro Valley, we would have expected all four wells to have the same, or nearly the same nitrate levels. They did not.

Morro Basin Well Contamination History

Exhibit 6 A-3-MRB-11-001 28630f036312:06 PM Nitrates in wells 3, 4, 14 and 15 were low until 2002, when they began spiking to previously-unseen levels. The following chart, from the Morro Basin Nitrate Study, shows the pattern for well 3 for the years 1954 through 2006.



As shown on the graph, the spikes over the 45 mg/l drinking water limit began in November 2002. Between 2002 and 2006, the highest levels of nitrates always occurred in the month of November, the month of the annual State Water Project shutdown. The Morro Basin wells were heavily used at that time of year, and used very little during other months. More recently, the nitrate levels in well 3 have remained high throughout the year, as illustrated by The Rock's graph of levels for January 2011 through January 2012.

Data for the years 2009 and 2010 is somewhat "spotty", with no nitrate data available for some of the wells in some months. However, we considered the available data sufficient to show patterns and trends.

The available 2009 data shows nitrate levels that generally exceed the 45 mg/l safety limit. Readings for well 3 are consistently the highest.



The available 2010 data shows higher nitrate levels at the beginning and end of the year, with lower ones in the spring. Again, well 3 consistently had the highest levels.

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The City's Case

The City's case was presented in the Morro Basin Nitrate Study, a report prepared for the City by Cleath and Associates. The study, dated December 2007, was commissioned after it was discovered in late 2006 that water with unsafe nitrate levels had been delivered to City water customers.

Some residents reported being told by City staff, shortly after the unsafe nitrate levels were detected, that the problem was caused by fertilizer from agricultural operations in the Morro Valley. The conclusion of the Morro Basin Nitrate Study echoed that viewpoint.

On page 22 of the study, under the heading "Conclusions", are these statements:

"The results of this study indicate that the main source of nitrate contamination in ground water at the City's Highway 1 well field is from nitrogen fertilizer applications associated with vegetable farming operations in the lower Morro Valley. Historical land use trends, water quality trends, and recharge dynamics in the basin all support this conclusion. Stable isotope results indicate the nitrate contamination can be derived from any of three sources:

- Exclusively from ammonium fertilizer applications
- *Mixtures of nitrate and ammonium fertilizer applications
- Mixtures of sewer exfiltration and fertilizer applications

Sewer exfiltration is not a major source of nitrate contamination in ground water at the City well field, based on an evaluation of sewer system and water quality information."

Study author Timothy Cleath based his conclusions on the results of a number of factors, including area hydrogeology, land use and farming operations, trends in nitrate concentrations, water quality analysis, and nitrate isotope studies. The report included numerous charts and tables of data, and extensive analysis of the data.

Most City of Morro Bay officials and staff accepted the study, and continue to state that the nitrate contamination in the Morro Basin wells is primarily caused by fertilizer.

The Residents' Case

Some Morro Bay residents immediately questioned the validity of the Morro Basin Nitrate Study. In 2008, longtime clean water activists Richard Sadowski and Marla Jo Bruton produced a formal report challenging the Study's research and conclusions and presenting their own theories.

Exhibit 6 A-3-MRB-11-001 288 of 3632 12:06 PM With the help of a chemist, they pointed out alleged flaws in the study's research and logic. They asserted that the nitrate isotope analysis data pointed to sewage, not fertilizer, as the contamination source. They alleged that well water samples used to test for components of wastewater were gathered at the wrong time of year to be meaningful. They pointed out that Cleath had failed to identify any change in farming operations that could account for the sudden 2002 jump in nitrate levels. They took issue with an out-of-context quote which, had it used stated in context, would have had a completely different meaning. When a Regional Water Quality Control Board staff member defended the Study, Sadowski and Bruton responded by with a letter once again laying out the specifics of their major disagreements with Cleath's work.

Sadowski and Bruton presented evidence that they believe points to leaking sewage as the source of the Morro Basin well nitrate problems. They noted that the nitrate levels began to spike immediately after an extensive MTBE remediation effort at the northeast corner of Main Street and Highway 41, the former site of a gasoline station. The site lies to the northeast of the Morro Basin wells.

They asserted that excavations and drilling performed at the remediation site, and nearby, opened paths for sewage in the ground water to enter the Morro Basin aquifer, which supplies the wells. The gasoline station was located directly over the aquifer boundary and was the site of major excavations. In addition, a total of 68 MTBE extraction and monitoring wells were drilled there, and to the west. All of the 68 extraction and monitoring wells were located to the northeast of the City wells.

Sadowski and Bruton alleged that sewage, leaking from Main Street sewer trunk lines north of Highway 41 was entering the aquifer through the newly-created openings. The Rock reported Morro Bay sewer line problems in a 2008 article, "Clear Damage". The photos in the article were captured from City video inspections of the City's Main Street trunk line, north of Highway 41, the section cited by Sadowski and Bruton.

Research Data Used

The Morro Bay Mutual well data, showing much lower nitrate levels than those found in City wells, was compelling. However, there was very little of it. Since Morro Bay Mutual Water is a "nontransient-noncommunity" system, and its water is not used for drinking, it is only required to test for nitrates once a year. A larger pool of data was needed to test the two theories regarding the cause of the nitrate problems.

Well test data for the City's four Morro Basin municipal wells was available. It was theorized that, due to their close proximity to one another, if the nitrates came from fertilizer, the nitrate levels in the wells should be the same, or very similar. If the nitrates came from sewage, the wells closest to the alleged source should have, on average, slightly higher nitrate levels than the wells farther away from it.

The primary source of data for The Rock's research was CDPH files. That data was supplemented with information from laboratory receipts retained by the City of Morro Bay.

Research focused on the years 2009 through 2011 and January 2012. CDPH data for years prior to 2009 was considered insufficient to produce meaningful results. This judgment was based on the assumption that isolated readings may or may not be representative of nitrate levels for the remainder of a given year.

It was presumed that that human activity, unusual weather patterns and/or or other isolated situations or incidents might temporarily affect nitrate levels and/or distribution patterns. In addition, occasional clerical or sample handling errors could result in the recording of test results that are not only incorrect, but are also not typical for a particular year. In the absence of sufficient data for other months of the year, unusual or invalid nitrate readings for a particular month could skew the research results and give the false appearance of a pattern or trend.

For the year 2008, the CDPH files contained data for just one month. The 2007 data covered only two months. For 2006, data was available for five months, but only three of them were consecutive. For 2005, data was available for three non-consecutive months. 2004 data was available for five months, but only three were consecutive. 2003 data covered just two months, as did the data for 2002 and 2001. There was data for one month in 2000, no data for 1999, and one month's worth for 1998.

In conjunction with the well test data, The Rock reviewed related reports, articles and maps.

Analysis and Findings

Exhibit 6 A-3-MRB-11-001 2893/2096312:06 PM The fact that the City wells and the Morro Bay Mutual Water well draw their water from the same aquifer has been a key argument supporting the theory that the nitrates cannot be from agriculture. The following diagram, part of an illustration from the City's Morro Basin Nitrate Study, shows the westernmost portion of the aquifer. Its boundaries are outlined in black. The remainder of the aquifer extends a considerable distance to the east.



The location of City wells 3, 4, 14 and 15 is marked on the diagram. The location of the Morro Bay Mutual Water well is not marked, but the power plant property location is marked, and is shown in the lower portion of the image. The agricultural areas that some believe are the source of the nitrates are located over, and adjacent to, portions of the aquifer to the east of the section shown here.

The blue dot, on the northeast corner of the intersection of Main Street and Highay 41, is the location of the former gasoline station that was the center of the MTBE remediation effort that ended in 2002. The remediation included extensive excavations and drilling. All of the work was done in areas to the northeast of the City wells. The sewer lines alleged by residents to be the source of leaking sewage entering the aquifer lie on Main Street, to the north of the blue dot.

The following diagram from the Morro Basin Nitrate Study shows the relative positions of Morro Bay City wells 3, 4, 14 and 15, and their approximate distances from one another.

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Using a full-sized printout of the original page and the author's scale, The Rock determined that wells 3 and 4 are about 75 feet apart. Wells 4 and 14 are about 48 feet apart, and wells 14 and 15 are about 212 feet apart.

The Rock compiled, reviewed, graphed and analyzed all available well test results for all four wells for the years 2009 through 2011 and for January 2012. All available Morro Bay Mutual Water well data was also reviewed and compared to the City well data.

The Morro Bay Mutual well showed consistently low nitrate levels, even in months when the City's nearby Morro Basin wells showed extremely high nitrate levels. For example, In May 2011, the levels of City wells 3, 4, 14 and 15 were 62, 45, 37 and respectively. Two Morro Bay Mutual Water well tests for that same month showed nitrate levels of 2.2 and 2.6.

Given that the distances between the City wells are significantly less than the distance between the City wells and Morro Bay Mutual Water well, it was expected that differences in nitrate levels in the City wells would be comparatively small. This, however, was not the case.

Within the City's Morro Basin well field, differences in nitrate levels were, in many months, significant. For example, in January 2011, the well 3 nitrate level was 91 and the well 15 level was 16. According to City well production reports, well 3 produced 211,500 gallons, and well 15 produced 208,000 gallons. Wells 3 and 14 produced 408,300 and 44,900 respectively.

We considered the possibility that the pumping action of one or more of the wells might influence the nitrate levels in one or more of the others. However, it appears that if such influences exist, they are minimal. Regardless of whether all of the wells, some of them, or none were used significantly in a given month, well 3 always had the highest nitrate levels. The lowest levels were nearly always found in well 15.

Nitrate levels in the wells were highest in late fall and early winter. Peak levels do not appear to correspond with the timing of fertilizing of crops. They do, however, appear to generally correspond to the peak water production times for the well field.

The diagram below shows the highest reported nitrate levels, by month, for well 3. For several months in early 2009, no data was available. Note the three peaks occurring in late fall.

> Exhibit 6 A-3-MRB-11-001 291 of 363 2/13/2012 12:06 PM



The following diagram shows well production, in gallons, for the Morro Basin well field for the years 2009 through 2011. Note the three peaks in late fall. The "extra" peak in the level of water production in early 2010 is believed to be due to the severe cutback of State Water Project deliveries for that period and resulting higher-than-normal use of the wells. It is not believed to be typical.



Sadowski and Bruton alleged that excavations done and and wells drilled during the MTBE remediation process at and near the intersection of Main Street and Highway 41 breached the aquifer and allowed sewage to enter. The Rock reviewed related documents.

The precise locations of the numerous wells drilled can be seen in the following diagram prepared by the MTBE remediation workers. The service station site is shown shaded in red, and the well sites are indicated by black dots.

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Wells 3 and 4 appear in the blue box. Wells 14 and 15, farther to the south, are not shown. It is clear that well 3 is closest to the excavation site and the wells. 2009, 2010, 2011 and 2012 data reviewed, graphed and analyzed by The Rock consistently shows the highest nitrate levels for well 3, which is closest to the excavations, monitoring wells and extraction wells. Nitrate levels in wells 4, 14 and 15 were consistently lower.

Conclusions and Questions

The Rock's research has resulted in three general findings that appear significant:

1. There appears to be a strong correlation between well nitrate levels and well distance from the MTBE remediation excavation and drilling locations.

2. There appears to be a significant correlation between Morro Basin well field water production levels and well water nitrate levels.

3. There appears to be no significant correlation between high well water nitrate levels and the times of year when we would have expected to see high fertilizer usage.

These findings appear to support the residents' theory that the nitrate problems are caused by sewage.

The "narrows" is the narrowest portion of the Morro Basin aquifer, and is located just east of Main Street. Any nitrates from Morro Valley agricultural activity that might reach the western portion of the aquifer, where the wells are, would travel in water "funneled" through the "narrows". It seems reasonable to assume that if the nitrates in the City's Morro Basin wells were primarily from fertilizer used in Morro Valley agriculture, all of those wells, and the Morro Bay Mutual Water well, would show similar nitrate levels. However, the levels vary widely.

A similar concern might be raised regarding nitrate levels if the nitrates come from sewage. If the pumping of the wells draws sewage into the aquifer, as Sadowski and Bruton suggest, why don't all of the wells in use during a given time period show the same nitrate levels?

A statement from the Morro Basin Nitrate Study may provide the answer. On page 2 of the study, it is stated, "Ground water

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movement below the narrows is controlled by the city well field. When the wells are in production, a pumping depression develops that draws water radially toward the wells, including sea water drought. During non-pumping periods, ground water flow below the narrows is toward the coast at a nominal hydraulic gradient of 0.005 ft/ft."

It seems unlikely that the Study's author meant that when the wells are pumping, the natural east-to-west movement of water through the aquifer ceases entirely. His statement appears to mean that when the wells are pumping, their influence is so strong that it alters the direction of the natural flow. Assuming that the water continues to flow through westward through the aquifer, it appears possible that the constant inflow from the east may be increasingly diluting the sewage as it travels farther from its source. Could this simple mechanism account for the nitrate level differences between the individual City wells, and between City wells and the Morro Bay Mutual Water well?

The Rock is not staffed by scientists, and we can only speculate as to the meaning of the results of our research. Those results, along with supporting data, will be provided to the CCC and the EPA, with requests for review and analysis by qualified personnel.

#

This article belongs to category: Local

Morro Basin Wells - Nitrates

	Nitrate Test Dates & Results; monthly water production total				
Month and Year	City Well 3	City Well 4	City Well 14*	City Well 15*	Morro Bay Mutual Water
January, 2009	400 gal.	78,900 gal.	200 gal.	200 gal.	
February, 2009	02/06: 84	02/03: 73			
	700 gal.	21,500 gal.	700 gal.	300 gal.	
March, 2009	100 gal.	37,300 gal.	31,100 gal.	300 gal.	
April, 2009		04/06: 13.5			
	900 gal.	33,300 gal.	900 gal.	400 gal.	
May, 2009	05/06: 74	05/06: 65			
	1,400 gal.	120,300 gal.	1,300 gal.	1,500 gal.	
June, 2009	0 gal.	25,700 gal.	0 gal.	0 gal.	06/16: 3.3
July, 2009	400 gal.	24,700 gal.	1,000 gal.	900 gal.	
August, 2009	08/04: 69	08/04: 59	08/04: 59	08/04: 46	
	900 gal.	1,400 gal.	1,600 gal.	1,400 gal.	
September,2009	09/15: 73	09/15: 61	09/15: 62	09/17: 51	
	1,400 gal.	52,300 gal.	2,900 gal.	1,800 gal.	
October, 2009	10/06: 72	10/06: 57	10/06: 58	10/06: 49	
	0	882,500 gal.	456,800 gal.	348,400 gal.	
November, 2009	11/03: 92 11/04: 92 11/05: 88 11/06: 90 11/09: 92 11/12: 96 11/13: 96 11/15: 110 11/16: 100	11/03: 76	11/03: 54		

Exhibit 6 A-3-MRB-11-001 295 of 363

	11/17: 100 11/18: 100 11/19: 100				
	3,392,300 gal.	6,019,400 gal.	4,902,700 gal.	3,486,300 gal.	
December, 2009	12/04: 100 12/07: 100	12/01: 96 12/30: 73	12/01: 45	12/01: 16	
	209,300 gal.	2,605,600 gal.	1,980,300 gal.	1,399,900 gal.	
January 2010	01/05: 89	01/05: 57	01/05: 43	01/05 19	
	01/26.96	01/14: 59 01/19: 52 01/26: 45			
	4,280,200 gal.	7,434,600 gal.	4,320,800 gal.	2,113,100 gal.	
February, 2010	02/02: 89	02/02: 36 02/23: 23.1			
	5,587,800 gal.	9,100,700 gal.	5,379,900 gal.	4,981,300 gal.	
March, 2010	03/02: 80.1	03/02: 22 03/09: 18.7 03/16: 16.1 03/23: 15.5 03/30: 14.4			
	7,120,500 gal.	11,233,500 gal.	6,806,400 gal.	6,460,300 gal.	
April, 2010	04/06: 60.7	04/06: 13.5	04/06: 8.7	04/06: 3.9	
	1,744,200 gal.	2,858,700 gal.	1,608,500 gal.	1,572,500 gai.	
May, 2010	05/04: 33	05/28: 3.2	05/04: 11.7	05/04: 3.8	05/25: 2.6
	538,100 gal.	379,200 gal.	455,900 gal.	540,700 gal.	
June, 2010	06/11: 23.5	06/01: 13.1			
	819,000 gal.	1,785,600 gal.	757,200 gal.	903,200 gal.	
July, 2010	07/09: 36	07/09: 18			
	965,000 gal.	1,815,000 gal.	799,400 gal.	952,900 gal.	
August, 2010	08/20: 67	08/20: 39			
	386,400 gal.	743,800 gal.	261,300 gal.	309,400 gal.	

Exhibit 6 A-3-MRB-11-001 296 of 363

September, 2010	09/09: 75	09/09: 32			
	760,200 gal.	1,494,200 gal.	634,100 gal.	169,500 gal.	
October, 2010	10/05: 89	10/05: 42	10/05: 18	10/12: 9	
	703,600 gal.	1,392,200 gal.	597,300 gal.	21,100 gal.	
November, 2010	11/02: 99	11/02: 69	11/02: 17	11/02: 10	
	5,201,000 gal.	2,498,700 gal.	2,771,600 gal.	442,500 gal.	
December, 2010	12/07: 110	12/21: 44	12/21: 20	12/07: 16	
	211,500 gal.	408,300 gal.	44,900 gal.	208,000 gal.	
January 2011	01/04: 91	01/04: 47	01/04: 19	01/04: 16	
January, 2011	252,800 col	491 700 ccl	201 000 ccl	197 200 col	
	252,800 gai.	481,700 gai.	201,900 gai.	167,300 gai.	
February, 2011	02/01: 90	02/01: 54	02/01: 23	02/01: 13	
	234,400 gal.	466,000 gal.	270,300 gal.	313,300 gal.	
March, 2011	03/01: 75	03/01: 51	03/01: 23	03/01: 14	
	164,200 gal.	309,600 gal.	216,500 gal.	231,400 gal.	
April, 2011	04/05: 61 04/19: 63	04/05: 53 04/19: 49	04/05: 26 04/19: 36	04/05: 17 04/19: 18	
	315,500 gal.	554,600 gal.	369,600 gal.	391,600 gal.	
May, 2011	05/03: 62	05/03: 45	05/03: 37	05/03: 20	05/31: 2.2
	502,000 gal.	924,300 gal.	628,900 gal.	668,400 gal.	05/31. 2.0
June, 2011	06/07: 53.6	06/07: 38.4	06/07: 31	06/07: 19.7	
	487,800 gal.	794,200 gal.	534,200 gal.	569,400 gal.	
July, 2011	07/05: 64.7	07/05: 41	7/05: 26.7	07/05: 18.7	
	503,700 gal.	978,100 gal.	639,300 gal.	681,700 gal.	
August, 2011	08/02: 58.5	08/02: 34.3	08/02: 27.6	08/02: 17.9	
	302,200 gal.	591,800 gal.	384,700 gal.	409,500 gal.	

Exhibit 6 A-3-MRB-11-001 297 of 363

September, 2011	09/06: 60.6	09/06: 34.9	09/06: 27.3	09/06: 20.8
	428,500 gal.	627,800 gal.	541,500 gal.	576,100 gal.
October, 2011	10/04: 65.9	10/04: 44.6 10/11: 36.5 10/18: 43.8 10/25: 44.8	10/04: 29.4	10/04: 23.1
	411,400 gal.	827,400 gal.	531,300 gal.	564,700 gal.
November, 2011	11/01: 70.9	11/01: 48.3 11/15: 67.1	11/01: 36.,2	11/01: 26
	3,171,600 gal.	0	4,072,300 gal.	4,345,900 gal.
December, 2011	12/06: 90.6	12/06: 76.2	02/06: 42	12/06: 63.5***
	404,600 gal.	757,200 gal.	513,400 gal.	549,100 gal.
			Landard Parks - Pro-	
January, 2012	01/03: 93	01/03: 89	01/03: 54.8	01/03: 48.9

February 18, 2012

Madeline Cavalieri California Coastal Commission 725 Front Street, Suite 300 Santa Cruz,CA 95060

FEB 2 2 2012

RECEIVED

CALIFORNIA COASTAL COMMISSION CENTRAL COAST AREA

Dear Ms. Cavalieri,

I am writing in regard to concerns regarding a strange drop in reported nitrate levels in Morro Bay's Chorro Valley municipal wells. The wells lie within the Coastal Zone. I find the change so odd that I am concerned that perhaps the samples are not being correctly handled prior to submission to the labs for testing. If that is the case, then an ongoing nitrate problem, which could have significant negative impacts on wildlife in the Morro Bay National Estuary, may not be properly addressed.

The table below shows nitrate levels in City well 9 (Ashurt well field, Chorro Valley) for recent years. Please note the significant, sudden drop in February, 2011. That same, sustained drop was recorded for all of the Ashurst wells currently active (9, 10, 16) and for inactive well 10A.

Month	2007 nitrate readings	2008 nitrate readings	2009 nitrate readings	2010 nitrate readings	2011 nitrate readings
January	24	-			54
February		70		47	18
March				66.4	14
April				52	
May			98		22
June	110				12.3
July					10.4
August			27	86	9.2
September	54		62	110	9.1
October				57	8.8
November					8.2
December				76	7.7

2007 -2009 data from CDPH; 2010 - 2011 data from City of Morro Bay

Shaded boxes indicate that the cited data sources had no data available for those months.

I do not believe the drop can be attributed to precipitation levels. The nearby Morro Basin City wells show no such drop in nitrate levels. The following data is for City well 3, in the Morro Basin well field.

Month	2010 nitrate readings	2011 nitrate readings	
January	96	91	
February	89	90	
March	80.1	75	
April	60.7	61	
May	33	62	
June	23.5	53.6	
July	36	64.7	_
August	67	58.5	
September	75	60.6	
October	89	65.9	
November	99	70.9	
December	110	90.6	

Also perplexing is the fact that while Chorro Valley well 10A had some extremely high coliform readings in 2011, the reported nitrate levels for the same months were also very low – comparable to those for well 9. Here are some coliform count results for well 10A during 2011.

Exhibit 6 A-3-MRB-11-001 299 of 363

Date	Coliform Count
February 3, 2011	73.3
May 3, 2011	602, e-coli 16
May 5, 2011	1,986, e-coli 2, heterotrophic plate count 575
May 10, 2011	225, e-coli 1, heterotrophic plate count 174
June 7, 2011	200.5
June 13, 2011	117
June 14, 2011	118.4
July 5, 2011	200.5
August 2, 2011	200.5
September12, 2011	200.5
October 4, 2011	200.5
October 7, 2011	200.5, fecal 36.4
October 10, 2011	32.4

As you may know, well 10A is believed to be severely contaminated with sewage from the nearby Roandoak housing facility. Nearby residents have claimed that this is the case, and I even have a letter from a retired City of Morro Bay water department employee saying the same thing. If, indeed, the high coliform counts are due to sewage contamination, how can the nitrates be so low?

You may be aware that, several years ago, the City went to the trouble and expense of having a consultant write a strongly-disputed report claiming that the nitrates in the Ashurst wells come from fertilizer used upstream of the wells. On page 13 of the report, it is stated,

"In general, nitrate concentrations at Ashurst wells have tended to increase during periods of lower water levels over the period of historical production prior to the State Water Project (through 1997). This type of correlation was also observed in the Morro Valley, where recharge from Morro Creek stream flow served to dilute nitrate concentrations during periods of high flow (Cleath & Associates, 2007)."

The study's conclusion says,

"The results of this study indicate that the main source of nitrate contamination in groundwater at the City's Ashurst well field is from nitrogen fertilizer applications associated with agricultural operations in the Chorro Valley between Canet Road and Chorro Creek Road."

Residents challenged the report, noting that significant evidence indicates the real source of the nitrates is sewage from a Roandoak, a residential facility located in the middle of the Ashurst well field, but the City and its hired consultant would not budge.

Low nitrate levels in the Ashurst wells would certainly appear to be potentially helpful in solving a problem for City staff. In December, 2008, the California Department of Public Health (CDPH) ordered the shutdown of all wells in the City's Chorro Valley Ashurst well field (**Exhibit 3**). One of the conditions for well reactivation is "A proposal for nitrate treatment for the Ashurst wells". Ordinarily, the nitrate-impacted water would simply be blended with other supplies, or treated using special facilities at the City's desalination plant. However, for the Ashurst wells, there is an "obstacle" to implementing those solutions

City infrastructure between the Chorro Valley wells and City blending tanks consists of just one water line. Obviously, when the wells are running, and water is being pumped to the tanks in town, there is no way to deliver safe, treated and blended City water to the Chorro Valley – AND, there are eleven Morro Bay City water customers in the Valley. Most of their properties are located near the Ashurst well field.

The City supplies these 11 customers with municipal water despite the fact that they are outside City limits, and has been doing so for many years. In some cases, building permits for the homes of this group of water customers were issued based on the City of Morro Bay's commitment to supply the homes with City water

In 2008, the Chorro Valley water customers discovered that, when the Chorro Valley wells were being used and the well water was being sent into town, water from the wells was also being delivered directly to their water connections. This is, of course, because water cannot flow in two directions in the one-and --only water line between the wells and the town. Prior to this discovery, the City had never informed customers that at times, their water might not be potable.

Exhibit 6 A-3-MRB-11-001 300 of 363 The water customers complained to the CDPH about being provided the potentially-unpotable water and asked for help. Subsequently, the CDPH's well shutdown order was issued. One of the conditions for well reactivation is "A proposal for nitrate treatment for the Ashurst wells".

As you know, while bacterial contamination can be dealt with through installation of a chlorination unit, nitrates are another matter. The City has stated its lack of interest in placing any kind of treatment facility in the Chorro Valley. After the 11 customers complained, the City also stated its intention to cut off their City water supply.

Some of the customers balked, and have cited considerable legal evidence that the City cannot cut off their water. They have cited water contamination issues in the Chorro Valley as a key reason for their refusals to switch from municipal water to private wells. In some cases, for properties under one acre, local codes forbid domestic wells. No property under an acre can have a domestic well because the well and the septic system would be too close together.

The water customers have pledged to fight the City and are standing fast. Hence, the City has no way to convince the CDPH to allow reactivation of the Ashurst wells so long as nitrates remain high. Officials and staff have said they are unwilling to install a treatment facility or a new pipeline between the City and the wells.

The City desperately wants to use the wells to supplement its precarious water supply. This became clear in 2009 when City staff and one of their "regular" consultants, Timothy Cleath, undertook a stream flow interference test at Chorro Creek. The stated objective was to obtain a waiver from SWRCB Decision 1633, which forbids use of the Chorro Valley wells when the downstream flow in the creek is less than 1.4 cfs. There was a major problem with the test. There was no stream flow to be interfered with because the stream in the area of the "test" was completely dry. Residents reported what was going on, and the "test" was halted.

Possibly related to all this is the fact that the City reportedly plans to annex the property in the area into the City limits. Those plans have been "in the works" since 2007 Morro Bay City Attorney Rob Schultz recently told a resident that plans to annex the property are active, and will be implemented as soon as the well issues are resolved. It appears that the high nitrates have been one of the biggest of those issues.

I am not a scientist, but I think that the sudden, sustained drop in nitrate levels is odd enough to warrant some attention. If, as previously stated, the reported figures result from some problem in the testing process, and actual nitrate levels are much higher, then this situation could delay work to correct the problem.

I ask that the CCC take a look at this issue and, if possible, have some nitrate testing of the Ashurst wells done by personnel outside the control of the City and the County.

Sincerely,

Linda Stedjee Morro Bay

Exhibit 6 A-3-MRB-11-001 301 of 363

RECEIVED April 7, 2012

Dear California Coastal Commissioners,

APR 0 9 2012

To many of us, the recently-published "CCC Briefing Booklet" regarding the Morro Bay – Cayucos wastewater treatment plant (WWTP) replacement project is the most bizarre attempt the farte may your opinion, and the opinions of members of the public. The "briefing booklet" reaches a new low, in terms of blatantly false information dispensed by Morro Bay and Cayucos Sanitary District (MBCSD) officials and staff.

While I am sure that the outrageous spin doctoring and outright falsehoods in the so-called "briefing book" have not escaped your attention, I will note some of them here, for the record.

False Information: Attempt to portray the project as an "upgrade". The very title of the booklet contains false
information, in that it refers to the project as the Wastewater Treatment Plant <u>Upgrade</u> project. As you know, this is
no upgrade. It is a replacement.

When it was learned, in 2009, that the current WWTP was in a flood path, project staff realized that a new plant would have to be built. Despite the fact that, three years ago, the project clearny turned from an upgrade to a replacement, MBCSD officials and staff continue to refer to the project as an upgrade. Many of us believe that this is done in an effort to avoid the more stringent environmental rules that apply to new construction, and as part of a strategy to keep the plant in the current location – which happens to lie in a flood plain, a tsunami zone, a scenic, visitor serving area, and an area of significant archaeological artifacts and Native American burials.

2. Spin doctoring: Attempt to portray the MBCSD as committed to protecting the environment through its support of tertiary wastewater treatment. On page 2 of the document, it is stated, "Morro Bay and Cayucos have voluntarily chosen to surpass the requirements for full secondary treatment by also including tertiary filtration into the treatment process"

I believe it is clear that no altruistic, high-minded motives can be credited to the MBCSD. First, the commitment was made under heavy public pressure, and with much argument. Second, it was just a year ago when we learned of the MBCSD's "Plan B" - a plan that involved backing out of commitments to build a plant with tertiary treatment capability in order to escape CCC permit jurisdiction. As stated in WWTP Project Manager Dennis Delzeit's April 1, 2011 staff report, "Plan B is a possible alternative that could provide full secondary treatment while being exempt from the issuance of a coastal development permit. The MBCSD staff is continuing to explore the potential concepts. Meeting all of the parameters is complex and the solution is not ready for presentation to the JPA at this time."

 Spin doctoring: Attempt to portray a past CCC decision as supporting current plant location. On page 6 of the booklet, it is stated that, "In Jan. 2009, Federal Consistency Certification CC-007-06 approved for reissuance of 301(h) NPDES modified discharge permits for WWTP and ocean outfall."

What is left out is a very critical fact. In January, 2009, it was believed that the project would be a true upgrade - an in-place refurbishing of the existing WWTP. The inherent implication was that the existing ocean outfall would still be needed. HOWEVER, when, "Morro Bay Cayucos Sanitary District Wastewater Treatment Plant Flood Hazard Analysis" was completed several months later, it was determined that the <u>existing WWTP facility was directly in the flood path, and would have to be demolished and replaced with a new one</u>.

Would the CCC have made the same decision regarding the ocean outfall, had it been known that a whole new facility would have to be built – OR – would the CCC have included some constraints aimed at enhancing water quality protection through elimination of the ocean outfall usage when the new plant was built?

4. False information and spin doctoring: References to and dependence on a badly- flawed alternative site "analysis". The booklet bases many of its conclusions on the Dudeck alternative site analysis which, as you know, has been the subject of many resident criticisms and complaints. I believe you have seen the residents' comments on the numerous and serious flaws in the "analysis". Therefore, I will mention only one, as an example.

> Exhibit 6 A-3-MRB-11-001 302 of 363

One of the most blatant actions taken by the MBCSD's hired consultants was to set a standard for disqualifying potential sites through a set of "fatal flaws", and then violate their own standard. The consultants eliminated several sites that had one or more of their "fatal flaws" including the PG&E property (referred to in the consultant report as Site 8) because it lies in a flood zone.

However, they did NOT eliminate Site 1, the MBCSD's preferred site, despite the fact that it has the same "fatal flaw" as Site 8. site1, as you know, is also in a flood plain. I will also note here that Site 8 is noticeably farther above sea level than Site 1, so is less prone to inundation in a tsunami.

Site 8 also lies in fairly close proximity to the current WWTP, and thus its use would require minimal re-routing of pipes. Interestingly, although much has been said about addressing the flooding at Site 1 through the use of fill, no similar consideration of the use of fill was made for site 8.

5. False information, missing information, and spin doctoring: Project schedule and cost misinformation. On pages 11 and 12 of the booklet are some of the most outlandish claims made thus far by the MBCSD. First, it must be noted that the "information" on this page is dependent upon the seriously-flawed alternative site evaluation, which eliminated most of the proposed sites; some for reasons just as dubious as the excuses given for NOT eliminating the MBCSD's preferred site.

The outrageous cost and project completion dates specified make little to no sense at all, and are not supported by any valid analysis. In addition to the complete failure to justify the numbers presented, there is another glaring omission.

The booklet fails to discuss alternative technologies that would allow a much smaller, technologically superior, and far less costly plant to be built – on a much smaller piece of land. PERC Water presented its capabilities to the MBCSD, and even completed, at its own expense, a customized design for a plant that can be built on any site. In the face of strong and often overt hostility from the MBCSD and their staff, and the staff's refusal to sign a standard non-disclosure agreement, PERC withdrew. However, I am sure that they did not discard the design, given their investment in it. Yet, the booklet ignores this opportunity.

PERC plants occupy a much smaller footprint than old-style technology, deliver the highest-quality of treated effluent, look (and smell) like office buildings, and can be built in a couple of years. A PERC plant would cost tens of millions of dollars less than the old-style technology that the MBCSD and their consultants favor, and the firm guarantees its cost, schedule and, if hired to run the finished plant, its rates for 30 years.

The PERC technology was presented to the MBCSD in great detail, and given that the technology was brought to the attention of the consultants. Its omission from the so-called analysis done by the consultants, and from the cost and schedule figures provided in the booklet, makes the missing PERC alternative the obvious "800-pound gorilla in the room".

This makes the following claim on page 12 of the booklet even more ridiculous: "Based on the analysis contained herein, it is therefore recommended that the Current WWTP (Site 1)be brought back before the CCC during its de novo review hearing as the most feasible alternative site for development of the MBCSD's WWTP facilities in accordance with its consistency with applicable City LCP and CCA policies, its ability to reduce environmental impacts to a less than significant level, and because it presents the most streamlined project implementation schedule, while being the most cost-effective option for the rate payer within the MBCSD service area."

6. <u>False Information</u>: Claims that the MBCSD's favored site is consistent with the LCP and Coastal Act policies: On page 13 of the booklet, it is stated that the site "can be found consistent with City's LCP and Coastal Act policies related to Coastal Hazards, Public Access and Recreation, Visual Resources, Archaeological Resources and Sustainability/Water Reclamation." This statement has prompted at least one resident to ask the questions, "On what planet? In what universe?"

Exhibit 6 A-3-MRB-11-001 303 of 363 In her comprehensive November, 2010 review of the project DEIR, the review that prompted you to take over permitting authority for the project, CCC staff member Madeline Cavalieri pointed out that, "In short, we have identified several fundamental areas of apparent inconsistency with the LCP and the applicable policies of the Coastal Act. First, the District's proposed preferred site location appears to be inappropriate for the development proposed. The concept of locating major public works infrastructure in an area that is subject to multiple significant hazards is not consistent with the hazards policies of the LCP. Further, the location is directly adjacent to the shoreline in a visually sensitive area where such development could frustrate LCP and Coastal Act public recreational access and visitor-serving objectives, and lead to adverse public viewshed impacts. Finally, the area has significant archaeological resources that, as required by the LCP, must be avoided. All of these impacts could be avoided or minimized by moving the project to an alternative location."

Numerous Morro Bay and Cayucos residents have independently reached and stated the same conclusions. Yet, almost a year-and-a-half later, our local officials and staff continue to waste our money and your time in their continued desperate attempt to avoid relocating the plant.

On page 14, it is stated that there is "low tsunami potential at Current WWTP site." This is likely what the builders of the inundated nuclear power plant in Japan said. The fact remains that the site is in a tsunami zone.

It is also stated that, "In 100-year floodplain, project reduces facility footprint by 50%, mitigation feasible to reduce risk". How does making the plant smaller reduce the risk that it will be hit by flood waters?

It is stated, "Facility improvements not affected by long-term shoreline erosion, storm surge or wave run-up, or sea level rise for a 100-year time period (well beyond design life of project." This appears to conflict with the views of many experts. It appears that the booklet authors "chose" their sources very "carefully".

The fact remains, as Ms. Cavalieri stated, "...the District's proposed preferred site location appears to be inappropriate for the development proposed. The concept of locating major public works infrastructure in an area that is subject to multiple significant hazards is not consistent with the hazards policies of the LCP."

On page 15, it is stated, "Existing and proposed treatment plant consistent with LCP land use designation and surrounding land uses." This is a scenic, visitor serving area. How is an old-style sewer plant, with its inherent odor problems, consistent with providing our visitors with an enjoyable visit to the beach? Does this land use provide maximum benefit to visitors? How about moving the plant and building visitor-serving facilities on the current site?

On page 16, in regard to visual resources, it is stated that the project is "Compatible with surrounding development" A sewer plant is compatible with a beach campground, RV parks, and a high school? I doubt that our visitors and the high school faculty and students would agree.

On page 17, it is stated that there are "no significant resources identified at Current WWTP site; site fully developed" and, "Impacts to cultural resources unlikely; feasible mitigation measures and monitoring program to reduce potential risk" This statement is in direct conflict with information provided by local Native American groups.

At the October 14, 2010 MBCSD meeting, Fred Collins, Chairman and Tribal Administrator for the Northern Chumash Tribal Council, stated that the locations of the current and future WWTP are in the middle of a Chumash village where his ancestors are buried. Both the Chumash and Salinans have confirmed that the site is a major archaeological site, and contains numerous burials.

Mr. Collins, along with representatives of the Salinan people, have clearly stated their objections to the building of the new WWTP at the MBCSD's favored site and asked to be involved in the site selection process. Their requests were ignored.

 Spin doctoring, false information, and missing information: Claims regarding water reclamation. On pages 18, 19, and 20 are various claims and recommendations regarding water recycling potential and benefits.

> Exhibit 6 A-3-MRB-11-001 304 of 363

On page 18, it is stated that, "City of Morro Bay and Cayucos area have adequate potable water supplies through State Water Project (SWP), groundwater, and local surface water to meet projected demands." This is a blatant falsehood. The City of Morro Bay's water supply is, to say the least, precarious.

More than once, the City has nearly run out of water. When State Water was cut back in 2010, the situation was dire, and the City went begging to the SWRCB for a waiver to use a Chorro Valley well in violation of an SWRCB order. As stated in communications by the City's attorneys, without use of the well, the City would have been unable to produce sufficient water to supply its water customers.

State Water Project infrastructure is fragile, as illustrated by the events in Morro Bay on Labor Day weekend, 2011. The State Water Project system went down due to mechanical failures of some of its pumps, and a simultaneous failure of some City infrastructure brought the town within hours of a major water crisis. These issues are described in the attached *Rock of the Coast article*, "Morro Bay's Unreliable Drinking Water Sources – New Concerns Emerge".

On page 18, it is also stated that, "*Recycled water cannot feasibly offset significant potable water demands*" On what data is this pronouncement based? Numerous scientists would dispute this claim, as would communities, located all over the world, where recycled water can and does offset significant potable water demands.

The 2009 article, "Indirect Potable Reuse: A Sustainable Water Supply Alternative", by Clemencia Rodriguez, Paul Van Buynder, Richard Lugg, Palenque Blair, Brian Devine, Angus Cook, and Philip Weinstein states, "In IPR, municipal wastewater is highly treated and discharged directly into groundwater or surface water sources with the intent of augmenting drinking water supplies" and,

"IPR is not new and has been successfully implemented in the United States (US), Europe and Singapore. In the US, California is the leading state with the highest number of IPR projects and more than 40 years experience; other states with demonstration or full-scale IPR projects include Arizona, Colorado, Texas, Florida and Virginia."

On page 18 of the booklet, it is also stated, "Significant groundwater recharge is not feasible due to limited aquifer storage capacity and high cost of advanced treatment to meet State groundwater replenishment requirements." At present, precipitation is the primary source of recharge for the aquifers. It is doubtful that the booklet authors would claim that precipitation is unnecessary to our water supply due to "limited aquifer storage capacity". It seems clear that the limited storage capacity makes additional recharge sources even more critically necessary.

Furthermore, as previously noted, PERC-style wastewater treatment plants produce effluent treated to the highest standards and ready for re-use, and can do so at a far lower cost than the alternatives listed in the booklet. This fact was left out by the booklet authors.

Also left out was important information regarding the potential for protecting water supplies and reducing potable water costs by using recycled water in "barrier wells" to prevent saltwater intrusion. According to the article "Battling Seawater Intrusion in the Central & West Coast Basins", WRD Technical Bulletin Volume 13, Fall 2007, By: Ted Johnson, Chief Hydrogeologist, "In coastal areas where groundwater is used for potable or agricultural purposes such as the Central and West Coast Basins (CWCB), intrusion can be a serious problem resulting in the shut down of wells or necessitating expensive desalination treatment." and,

"The barrier projects have been successfully protecting the fresh water aquifers in the CWCB for over 50 years. Currently, both potable water and recycled municipal wastewater treated by microfiltration, reverse osmosis, and advanced oxidation in some cases (ultraviolet light and hydrogen peroxide) are used. The water is injected into the CWCB aquifers to depths up to 700 feet."

At present, brackish Morro Basin well water must go through a very expensive desalination process to make It potable.

8. <u>Spin doctoring and conflicting information</u>: Recommendations related to water reclamation: On page 20, it is stated that, "MBCSD should continue with proposed project to upgrade to full disinfected secondary treatment in accordance with the Settlement Agreement with RWQCB" I find this statement fascinating in light of the conflicting

A-3-MRB-11-001 305 of 363 comment on page 2, "Morro Bay and Cayucos have voluntarily chosen to surpass the requirements for full secondary treatment by also including tertiary filtration into the treatment process" Which is it? Are they committed to tertiary treatment or not?

Also on page 20 is this recommendation: "Pursue expansion of recycled water system to areas immediately surrounding the WWTP." As I have mentioned in prior communications with you, I have long suspected that the MBCSD's dogged insistence on keeping the WWTP at the current location has to do with plans for a huge development on the neighboring power plant property.

The development, sponsored by Ecobaun, is so big that no permit could possibly granted unless a new and substantial long-term water supply could be established. In fact, large-scale development for nearby Pismo Beach was recently rejected by the local LAFCO due to water supply concerns. The unreliability of State Water was cited by LAFCO personnel.

I believe that the effluent from the new WWTP has been "earmarked" for use by the proposed power plant property development. This explains not only the insistence on the current location, but the apparent push to go back to secondary treatment.

If our new WWTP were located elsewhere, it would be more difficult to sell the idea of sending the treated effluent to the power plant site, and the developers would have to pay for the necessary infrastructure. If our new WWTP produced water ready for re-use, there would be pressure to use it to benefit residents. However, if the effluent only got secondary treatment, sending it to the neighboring power plant property might be presented as a great way to "dispose" of it.

In short, I believe that the booklet statement, "Pursue expansion of recycled water system to areas immediately surrounding the WWTP" clearly reveals the real reasons for all of the expensive nonsense to which the MBCSD has subjected you and local residents.

I ask that you consider what parties could potentially benefit financially from the proposed power plant development project, and factor your conclusions into your review of the issues at hand.

On page 23, the booklet states the conclusion "Current WWTP site determined to be least environmentally impactful of all sites considered and can be found consistent with City's LCP and Coastal Act policies" Nonsense.

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Please consider the potential "profit motives" of various individuals and organizational entities behind the spin doctoring and outright falsehoods in the "briefing booklet. Then, in concert with the wise counsel of your own staff, please instruct the MBCSD to construct its facilities on a more appropriate site, with full water reclamation capabilities, using the most advanced, lowest cost technology.

Sincerely

Linda Stedjee 2848 Birch Avenue Morro Bay, CA 93442

Istedjee@charter.net

Exhibit 6 A-3-MRB-11-001 306 of 363

Morro Bay's Unreliable Drinking Water Sources – New Concerns Emerge

Posted by Linda Stedjee on Jan 15, 2012

The City of Morro Bay gets up to 90% of its drinking water from the State Water Project. State Water has proven to be an unreliable source due to supply limitations resulting from drought. In late 2009, the City received word that, due to drought conditions, it might receive only 5% of its expected 2010 allocation of water from the State system. However, drought is only part of the reason why Morro Bay's dependence on State water is of concern to some residents. The reliability of the State Water Project's water delivery infrastructure is an equally serious issue.

Other Morro Bay water sources include the Morro and Chorro Basin municipal wells and, occasionally, five seawater wells located along the Morro Bay harbor. The seawater and brackish Morro Basin well water are both processed at the desalination plant.

City wells cannot meet the City's water needs. The State has imposed pumping restrictions to prevent excessive drawdown of the aquifers, and water quality problems prevent usage of some of the wells. Desalination plant capacity and cost issues limit the amount of water processed at that facility.

State Water Project Infrastructure Vulnerable to Earthquakes

Concerns about the viability of State Water Program infrastructure have been documented by State Water Contractors (SWC), a non-profit association of 27 public agencies from Northern, Central and Southern California. Member agencies purchase water under contract from the California State Water Project.

According to the SWC web site, "The U.S. Geological Survey has warned of a 63% probability that a 6.7 magnitude or larger earthquake will hit in the next 30 years. An earthquake of that size has the power to not only devastate local communities, but wipe out a significant portion of the state's water supply for more than a year." And, "The water supply for 25 million people, businesses and farms is channeled by old and fragile levees built 100 years ago. A major earthquake in Northern California could trigger levees to break throughout the Delta, allowing saltwater to rush in from the San Francisco Bay contaminating a significant portion of our freshwater supply."

Such an event in the Delta would impact Morro Bay, which receives its State water deliveries through the Central Coast Water Authority (CCWA). The CCWA's 2011 Urban Water Management Plan describes the State Water Project's water delivery system as follows: "The keystone of the SWP is Lake Oroville, which conserves water from the Feather River watershed. It is the SWP's largest storage facility with a capacity of about 3.5 million acre feet (maf). Releases from Lake Oroville flow down the Feather River into the Sacramento River, which drains the northern portion of California's Central Valley. The Sacramento River flows into the Delta, comprised of 738,000 acres of land interlaced with channels that receive runoff from about 40% of the state's land area. The SWP and the Central Valley Project (CVP) rely on Delta channels as a conduit to move water from the Sacramento River inflow to the points of diversion in the south Delta."

"Thus, the Delta is actually part of the SWP conveyance system, making the Delta a key component in SWP deliveries. The significance of the Delta to SWP deliveries is described in more detail below."

"From the northern Delta, Barker Slough Pumping Plant diverts water for delivery to Napa and Solano counties through the North Bay Aqueduct. Near Byron in the southern Delta, the SWP diverts water into Clifton Court Forebay for delivery south of the Delta. Banks Pumping Plant lifts water from Clifton Court Forebas A-3-MRB-11-001 307 of 363 California Aqueduct, which channels the water to Bethany Reservoir. The water delivered to Bethany Reservoir from Banks Pumping Plant is either delivered into the South Bay Aqueduct for use in the San Francisco Bay Area or continues down the California Aqueduct to O'Neil Forebay, Gianelli Pumping-Generating Plant, and San Luis Reservoir."

Other State Water Project Infrastructure Issues

The potential impact of earthquakes is only one of the State Water Project infrastructure issues of concern to Morro Bay residents. A January 2011 California State Water Project notice to State Water Project contractors stated, "Due to continuing issues with the recruitment and retention of sufficiently skilled trades and crafts personnel, aging equipment, and unexpected equipment failures, DWR was not able to export over 100,000 acre-feet of additional water that was available for export since December. This has caused a delay in the filling of the San Luis Reservoir and will impact overall allocation of water in 2011."

A State Water Project equipment failure very nearly left Morro Bay residents without a supply of clean, safe drinking water during the 2011 Labor Day weekend. As reported in Neil Farrell's September 2011 Bay News article, "Water Crisis Averted", "State Water Project officials averted a potentially serious water supply problem when its system unexpectedly went down due to mechanical failures in some of its massive pumps.

"Meanwhile, in an eerily similar set of occurrences, Morro Bay officials averted a potential local water shortage, after part of its backup water system proved unprepared. Combined, they could have made for a water shortage in the middle of Labor Day Weekend."

Questionable Morro Bay Backup Water Supply Provisions

One of the backup water systems discussed in Farrell's article is the City's desalination plant, which is capable of processing both seawater and brackish water from the City's Morro Basin well field. The plant, while effective in producing a significant amount of potable water, cannot replace State water deliveries when the State system is "down". The plant is very expensive to run and even when operating at full capacity can produce only a fraction of the water needed to meet the City's needs.

Farrell's Bay News article also described the potential use of the City's "Plan C", which would have evidently involved use of a group of Chorro Valley wells that are supposed to be in "inactive" status. Quoting City of Morro Bay staff member Dylan Wade, the article states, "Had state water not come back online when it did, the city would have been forced to turn to Plan C.

"By Monday, we would have added the Chorro water," said Wade. Chorro water is high in nitrates and problematic because it isn't treated and must be blended with treated water to reduce the overall nitrate levels. Doing that would have triggered the City's water emergency notification plan, which Wade said would have included a warning to residents that they were using the groundwater wells and to be careful of the nitrates, which are potentially harmful to babies, pregnant women and folks on dialysis."

The Chorro Basin wells contaminated with nitrates are in the City's Ashurst well field, and were placed in inactive status in 2008, by the California Department of Public health (CDPH). The CDPH took this action after it was discovered that at times, the City had been delivering potentially-harmful, untreated Ashurst well water to a group of water customers.

In a December 2, 2008 letter to Morro Bay's then-Public Services Director Bruce Ambo, CDPH official Kurt Souza stated, "The Department is requiring the City to cease the use of the Ashurst wells 9, 9A, 10, 10A and 16. This letter serves as a notice to the City that the Department has changed the operational status of these wells to inactive.

Exhibit 6 A-3-MRB-11-001 308 of 363 "To reactivate these wells, the City must submit an application to the Department for their use. The application must include:

- A proposal for nitrate treatment for the Ashurst wells. The treatment (e.g. blending) must be provided before any customer connections.
- Plans of the Distribution system piping. The plans must clearly show service connections and the junction of water from Well 11A with water supplied from the Ashurst well field. The plans must also show the dedicated line to the Kings Tanks and service line returning from Kings Tanks to the east end of town.
- A chlorination plan for the Ashurst wells. The plan shall describe how all Ashurst wells are chlorinated prior to delivery to customers."
- City of Morro Bay staff are well aware that the Ashurst wells are not to be used, as evidenced by this statement in the City's 2010 Urban Water Management Plan: "...the City cannot use the Ashurst wells as a potable drinking water supply until the City provides blending, treatment, or nitrate levels in the basin subside."

The CDPH letter also stated, "The City must always consult the Department when 'Do Not Drink' notices or any other notices related to a change in the quality of drinking water, are served to customers". The CDPH issued that requirement as a result of an error in a notice that had been delivered to Chorro Valley water customers. The City's ability to consult with the CDPH, over a holiday weekend, and in the midst of a crisis appears questionable.

While a City contractor has claimed that nitrates in City wells are primarily from agriculture, some residents dispute that conclusion. They cite sewage from failed septic systems at a residential facility on Chorro Creek Road as the primary source of the nitrates in the local groundwater.

The City's "Plan C" for dealing with water shortage emergencies has concerned and baffled some residents. Use of the Ashurst wells would potentially endanger the health and safety of water customers, incur significant liability for any health impacts, and would violate a CDPH order, potentially triggering enforcement action against the City. Yet, City officials and staff appear willing to take the risks.

Concerned residents have noted that including appropriate water reclamation processes and aquifer recharge as part of the WWTP replacement project could potentially resolve nitrate contamination issues.

Dilution from groundwater recharge is a basic attenuation process for nitrates. By using reclaimed wastewater to recharge the Chorro Basin aquifer, the City could potentially reduce nitrate concentrations enough to bring them within safe levels. Aquifer recharge would also increase the amount of well water available for use. In addition, installation of additional chlorination facilities at the Ashurst well field would address the remaining CDPH concerns, and the Ashurst wells could potentially be put back into active status, making "Plan C" a viable, safe measure for use in times of water shortage.

Yet, City officials and staff have resisted both water reclamation recommended by residents and the CCC, and installation of the chlorination devices recommended by the CDPH. Reasons for this resistance are unclear. It has been alleged that unwillingness to pursue water reclamation is connected with planned development of power plant property, and that refusal to install the chlorination devices may be tied to concerns that this action would require a new Coastal Development Permit (CDP). Some residents have questioned whether the City has CDPs for the Ashurst wells. Application for a CDP for the chlorination devices could potentially focus CCC attention on well permit status.

Exhibit 6 A-3-MRB-11-001 309 of 363

Dear Coastal Commissioners,

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May 30, 2012

SR,

I am writing in regard to two issues:

1. The City of Morro Bay is negotiating new State Water Resource Control Board (SWRCB) permit conditions for use of its Chorro Valley wells. This issue can be closely tied to water reclamation concerns regarding the construction of the new wastewater treatment plant (WWTP). Also of concern to residents are related environmental impacts, since well usage can negatively impact the Morro Bay National Estuary (MBNE), the Bay and the ocean.

2. Residents are concerned that the City of <u>Morro Bay</u> may have plans to build a major thoroughfare adjacent to ESHA, and to obtain permission to build a connecting bridge by disguising the project as a bicycle path to improve coastal access. The true purpose of the bridge is alleged to be a roadway to divert Highway 41 tourist traffic to the Embarcadero, bypassing downtown, and possibly to serve a massive development proposed for the Morro Bay power plant property.

1. Chorro Valley Wells

Morro Bay's Chorro Valley municipal wells lie to the east of town, outside city limits, but within the Coastal Zone. They draw their water from the Chorro Basin aquifer, which is connected to the ocean and is subject to salt water intrusion. Portions of the aquifer are also part of, and critical to the health of the MBNE.

MBNE Concerns

As noted in the MBNE's Comprehensive Conservation and Management Plan (CCMP) for Morro Bay,

"The second dilution mechanism is freshwater flow from Chorro Creek and Los Osos Creek. The flushing analysis has shown that these freshwater flows have a significant impact on flushing in Morro Bay. During low-flow periods in the summer months, the bay is especially susceptible to build-up of pollutants in certain areas, most notably, the southwest portion of the bay, State Park Marina, and the delta area"

"Both Chorro Creek and Los Osos Creek support an assemblage of native and non-native fish that includes steelhead trout, three-spined stickleback, prickly sculpin, and, at least in the past, tidewater goby. The creeks serve as transportation corridors and habitat for numerous species of birds and wildlife."

Failure to Comply With Current SWRCB Well Permit Conditions

In 1997, the SWRCB issued its Decision 1633, which placed specific restrictions on usage of the Chorro Valley wells. Some conditions were specifically aimed at protecting wildlife and other coastal resources. One of the conditions that appears on all of the Chorro Valley well permits issued by the SWRCB is the requirement that the wells not be used when the surface flow in Chorro Creek is less than 1.4 cubic feet per second. Monitoring gauges were supposed to have been placed in 1997 and used to ensure compliance. To date, the City has not complied and was, until 2008, simply using the wells whenever, and as much it wanted.

In 2008, residents caught the City and its hired consultant conducting a highly-suspect "stream flow interference study". According to the consultant's proposal, the "study" was done in an attempt to obtain a waiver from a specific well permit condition, the 1.4 cubic feet per second rule. The problem was that at the time, the stream was completely dry. Residents reported what was going on and demanded to know just how one could measure the impact of well usage on stream flow when the stream had no flow to be impacted. The "study" immediately stopped. A couple of years later, the City and its consultant tried again, but this time failed to obtain required permits from the Department of Fish and Game. That agency put an immediate stop to the "study".

It should be noted that it had been previously established that well usage impacts surface stream flow. The consultant's own proposal for the Ashurst well field study "study" states that "In November 1997, Cleath & Associates performed a maximum well field production test, which documented stream flow Interference. The amount of interference was 20% of that total well field production." An earlier study had documented the impact of upstream well 11A, and is described within the Decision 1633 document.

As you may be aware, the CCC protested the granting of the well permits at the 1997 SWRCB hearings, and, as noted in Decision 1633 documentation, "proposed conditions to protect public trust resources in its protest of the City's applications."

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To date, the City has not complied with the monitoring requirements issued by the SWRCB in 1997, and has failed to provide the required evidence (as specified in Decision 1633 and the well permits) for a waiver.

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Because the wells have been shut down for several years, I believe that resuming their usage will constitute a major change in usage, and will thus require a CDP.

City of Morro Bay Water Supply Issues

The City of Morro Bay's water supply is precarious. Most of the time, State water is sufficient to supply the basic needs of residents and visitors, and only limited well usage is necessary. However, there are occasional emergencies when it is absolutely necessary to use greater quantities of well water in order to meet the basic water supply needs. State water is not always reliable. Short supply, increasing demand, maintenance shutdowns, and infrastructure frailties have all impacted Morro Bay in the past. For example, on Labor Day, 2011, the City nearly ran out of water when State Water Project pumps failed. Municipal well water, much of it processed by the desal plant, supplied the town until State water delivery resumed.

Clearly, in an emergency, a basic water supply must be provided for health and safety reasons. However, in all situations, including emergencies, the municipal wells must be used in a responsible manner that meets human needs while protecting the environment to the maximum extent possible. Many believe that to date, the City of Morro Bay has shown a very clear disregard for the environment, and has failed to take the steps necessary to avoid significant environmental damage.

According to residents, lack of concern for the environment has been demonstrated not only in the City's failure to abide by well permit conditions, but by other actions and inactions. These include failure to maintain the sewage collection system in good repair, and the widening of the Embarcadero Road Extension, in blatant violation of CCC-issued permit conditions (a 20-foot wide strip of ESHA was destroyed for the entire length of the roadway). A recent scheme to use the WWTP outfall to dispose of industrial brine waste (halted by your staff), and the insistence of City government on locating the new WWTP in a flood zone, a tsunami zone, a scenic visitor-serving area, and a sacred Native American burial site, have also raised concerns regarding judgment, sensitivity, and motives.

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Chorro Valley well issues are, of course, closely tied to the WWTP replacement project. Use of reclaimed wastewater to recharge the Chorro Basin aquifer, which reportedly cannot hold a great deal of water and thus needs regular recharge, appears to be an ideal way to help prevent the serious negative environmental impacts that can result from overuse of the Chorro Valley wells.

The City has, in the opinion of some residents, clearly demonstrated an unwillingness to comply with its well permit conditions. Imposition of a wastewater reclamation and aquifer recharge requirement, as part of Chorro Valley well CDP conditions, could serve as critical protection against the negative impacts of irresponsible well usage.

Because the Chorro Valley aquifer can hold only a limited amount of water, and because it is a critical part of the MBNE system, some residents believe that, even with supplemental aquifer recharge provisions in place, the Chorro Valley wells should only be used in case of a water emergency resulting from State Water Project delivery failures. This would enable the City to provide water necessary to sustain its residents and visitors, while preventing irresponsible depletion of the aquifer.

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The City of Morro Bay appears to be gearing up for another push to build a bridge across Morro Creek, connecting Highway 41 and the Embarcadero Road extension. The bridge across Morro Creek would be constructed in an environmentally sensitive area immediately adjacent to the ocean.

City staff claim that their only objective is to enhance the Coastal Trail for bicycles and pedestrians. Many residents believe that there is another agenda.

Allegations Regarding Scheme to Divert Tourist Traffic to the Embarcadero

According to some Morro Bay residents, for at least twenty years, merchants on the City's Embarcadero have been pushing City staff and officials to build the bridge in order to bring the Highway 41 tourist traffic directly to the Embarcadero, bypassing downtown Morro Bay.

The downtown merchants and a number of residents have successfully fought the plan, citing environmental concerns, and loss of tourist business in the downtown area. However, City staff have allegedly continued work to implement plans for the Highway 41 to Embarcadero Road connection.

Evidence Supporting the Allegations

In March 2006, the CCC approved a permit for the Harbor Walk project. The permit included special conditions, one of which was restriction of the Embarcadero Road extension to a maximum width of 22 feet. In June 2006, just three months after the CCC decision was made, City staff ignored and violated the CCC ruling, and widened the roadway to about 42 feet.

The Embarcadero Road extension is currently a "dead end street". It ends at Morro creek (near the current WWTP and the power plant) and is little used. The only "destinations" currently accessed by the road are a building housing fishermen's lockers, and an illegally-constructed City storage yard. One can visit the area and see no more than a couple of cars (or fewer) in a half-hour period. There simply is no current need for such a wide roadway for car traffic, and the road did not have to be widened by an extra 20 feet just to provide a bike and pedestrian path.

Around the same time that City staff were illegally widening the roadway, they were also negotiating with then-power-plantoperator Duke Energy. City staff allegedly convinced Duke to build the bridge over Morro Creek in order to minimize construction truck traffic impacts on the downtown area. This was to be accomplished by bringing the trucks down Atascadero Road, over the proposed new bridge, and then south, down the Embarcadero Road extension to the west side of the power plant property.

In fact, according to knowledgeable residents, truck traffic associated with the modernization project would never have had to pass through the downtown area, making the bridge unnecessary for the purpose claimed by City staff. The back gate of the power plant property, on Main Street, was already set up to handle truck traffic. Traffic coming from Highways 1 and 41 would NOT travel to the gate by going through downtown. There are Highway 1 exits to Main Street north of the power plant gate. The Highway 41 – Main street intersection is alsonorth of the gate. Downtown is south of it.

When construction work at the power plant was complete, the bridge was supposed to be bequeathed to the City to be used for a pedestrian and bike path. It was also noted that it, and the connected roadways, could also be used by emergency vehicles.

Duke Energy sold the power plant and the modernization project was never done, but recently-produced City documents indicate that plans for the bridge are still being pursued.

Allegations Regarding Possible Connection to Major Development Proposed for Power Plant Property

Some residents believe that the bridge and roadway have not one, but two real purposes that have nothing to do with a bike and pedestrian path. We believe that, in addition to diverting Highway 41 tourist traffic directly to the Embarcadero tourist area, the new bridge and roadway are intended to serve a massive power plant property development project proposed by Ecobaun.

> Exhibit 6 A-3-MRB-11-001 312 of 363
On the Ecobaun Web site are detailed plans for a development that would bring thousands into town every day. To see the project plans, please go to Ecobaun.com, click on the word "projects" on the right side of the page, and on the projects page, click on the aerial photo of the power plant (on the right side of the page).

The artist's rendering of the facility shows a bridge across Morro Creek, and a connecting roadway that passes through the development and is apparently connected to the Embarcadero tourist area to the south. The list of project team members includes Ecobaun, Dynegy, Hart Howerton, and Sherwood Design Engineers.

There is an interesting side issue related to this proposed development. Under the Ecobaun Web site topic "Sustainable Framework", there are references to the project backers' intent to provide a sustainable water supply and to have 100% refiltration. This seems to imply recycling of wastewater.

No matter what water treatment process might be used, a 100% recovery of all water entering the process would simply not be possible. Furthermore, much of the water used at the site would be used for irrigation of the extensive green spaces shown on the facility's master plan, meaning that it could not all be "recaptured" and recycled again. A constant new supply of water would be needed.

This is why some of us believe that the City staff and Council majority are fighting to build the new WWTP in such an inappropriate place, and to avoid reclaiming the water for the recharge of our aquifers. Big developments must prove a reliable long-term water supply. That inappropriate WWTP site is right next door to the power plant property.

We believe that it is essential to Ecobaun project plans that the City's wastewater be brought to that location for processing. Moving the plant would mean that the reclaimed wastewater would most likely be used to recharge our aquifers; that it would be used to benefit the residents of Morro Bay; not the enormous proposed power plant property development.

These are only suspicions, but if they are correct, then not only are some of our City officials and staff planning to obtain public funds to build a "bike path" that is really intended to become a major roadway, but are also wasting a great deal of the public's money in an attempt to manage the WWTP project in such a way as to support development.

Current Status of Bridge Project

According to the Morro Bay City Council Goals and Priorities 2012-2013 document, "Staff should start design and permitting process now, using USHA funds (\$100k). Staff will request USHA funding for this project when staff meets with SLOCOG staff In May 2012 for the FTIP Discussion." "SLOCOG" refers to the San Luis Obispo Council of Governments. As noted on its web site, "SLOCOG provides transportation planning and funding for the region." "USHA" refers to Urban State Highway Account.

Some residents believe it possible that City staff might convince Dynegy, current operator of the power plant, to build the bridge once promised by Duke. According to reliable sources, plans are currently being formulated by Dynegy to keep the power plant running by putting jet engines in units 3 and 4. The work on the plant would be done as an "upgrade", allegedly to bypass the full permitting process and its inherent focus on environmental issues. Sources say this project is being planned with full cooperation from City staff.

As always, thank you for your time and your attention to my concerns.

Sincerely,

Linda Stedjee Morro Bay Istedjee@charter.net

Exhibit 6 A-3-MRB-11-001 313 of 363 We may need more than water reclamation

Craig, Susan@Coastal

 From:
 Cavalieri, Madeline@Coastal

 Sent:
 Monday, March 26, 2012 11:06 PM

 To:
 Craig, Susan@Coastal

 Subject:
 FW: We may need more than water reclamation....

 Please print for WWTP file...

From: Linda Stedjee [mailto:lstedjee@charter.net] Sent: Fri 3/23/2012 7:41 AM To: Cavalieri, Madeline@Coastal Subject: We may need more than water reclamation....

Hi,

There is some useful information in a news story, "City Water Losses 'Acceptable'" by Neil Farrell :

http://www.tolosapress.com/managed_files/cms/BNWeblssue032212.pdfI believe it points clearly to the need for water reclamation. The story says,

> As for the future, Wade said the latest projections for water delivery > to the city from the State Water Project was in the high 30 to low 40 > percent of what's been contracted for. "That's not going to impact > us," he said. "It's still high enough to meet our needs." The city > pays some \$2 million a year to participate in the project and is > contracted to get 1,313 a.f., every year at 100% deliveries. It also > has a sort of insurance policy against low deliveries, having > purchased an additional 1,313 a.f., from the project. That means the > State Water Project would have to deliver less than 50% before the > city loses any of its contracted for amount but the city can't get > more than the 1,313 acre feet. The city has three other water sources > --- wells in the Morro Creek and the Chorro Creek basins and a > desalination plant — for backups Since "high 30 to low 40 percent of what's been contracted for" is obviously less than 50%, it sounds like we are NOT going to get the full 1,313 acre feet. All but one of the Chorro Basin wells are shut down by the CDPH, and the use of the remaining Chorrop well is restricted by

SWRCB Decision 1633. An emergency waiver could be obtained, but then use of the well could cause environmental damage including seawater intrusion. The water from the Morro Basin wells has to be processed through the desal plant - very expensive.

Reclamation of wastewater for aquifer recharge is clearly necessary, but a little more attention to keeping track of the water we have would mean that the use of backup water sources could be minimized, thus helping prevent environmental damage. According to Farrell's story, the City seems to have misplaced 68.3 acre feet, or 22,255,623.3 gallons of water. Swell. According to the article, the total lost is 5.5% of the total water produced by the City, and Dylan Wade said that, ""Anything less than 10 percent is considered good." I submit that, given our water supply situation, it is NOT good.

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 314 of 363 .

Dear Coastal Commissioners,

CALIFORNIA COASTAL COMMISSION CENTRAL COAST AREA

RECEIVED

JUN 0 5 2012

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A-3-MRB-11-001 315 of 363

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May 30, 2012

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In fact, according to knowledgeable residents, truck traffic associated with the modernization project would never have had to pass through the downtown area, making the bridge unnecessary for the purpose claimed by City staff. The back gate of the power plant property, on Main Street, was already set up to handle truck traffic. Traffic coming from Highways 1 and 41 would NOT travel to the gate by going through downtown. There are Highway 1 exits to Main Street north of the power plant gate. The Highway 41 – Main street intersection is alsonorth of the gate. Downtown is south of it.

When construction work at the power plant was complete, the bridge was supposed to be bequeathed to the City to be used for a pedestrian and bike path. It was also noted that it, and the connected roadways, could also be used by emergency vehicles.

Duke Energy sold the power plant and the modernization project was never done, but recently-produced City documents indicate that plans for the bridge are still being pursued.

Allegations Regarding Possible Connection to Major Development Proposed for Power Plant Property

Some residents believe that the bridge and roadway have not one, but two real purposes that have nothing to do with a bike and pedestrian path. We believe that, in addition to diverting Highway 41 tourist traffic directly to the Embarcadero tourist area, the new bridge and roadway are intended to serve a massive power plant property development project proposed by Ecobaun.

> Exhibit 6 A-3-MRB-11-001 317 of 363

On the Ecobaun Web site are detailed plans for a development that would bring thousands into town every day. To see the project plans, please go to Ecobaun.com, click on the word "projects" on the right side of the page, and on the projects page, click on the aerial photo of the power plant (on the right side of the page).

The artist's rendering of the facility shows a bridge across Morro Creek, and a connecting roadway that passes through the development and is apparently connected to the Embarcadero tourist area to the south. The list of project team members includes Ecobaun, Dynegy, Hart Howerton, and Sherwood Design Engineers.

There is an interesting side issue related to this proposed development. Under the Ecobaun Web site topic "Sustainable Framework", there are references to the project backers' intent to provide a sustainable water supply and to have 100% refiltration. This seems to imply recycling of wastewater.

No matter what water treatment process might be used, a 100% recovery of all water entering the process would simply not be possible. Furthermore, much of the water used at the site would be used for irrigation of the extensive green spaces shown on the facility's master plan, meaning that it could not all be "recaptured" and recycled again. A constant new supply of water would be needed.

This is why some of us believe that the City staff and Council majority are fighting to build the new WWTP in such an inappropriate place, and to avoid reclaiming the water for the recharge of our aquifers. Big developments must prove a reliable long-term water supply. That inappropriate WWTP site is right next door to the power plant property.

We believe that it is essential to Ecobaun project plans that the City's wastewater be brought to that location for processing. Moving the plant would mean that the reclaimed wastewater would most likely be used to recharge our aquifers; that it would be used to benefit the residents of Morro Bay; not the enormous proposed power plant property development.

These are only suspicions, but if they are correct, then not only are some of our City officials and staff planning to obtain public funds to build a "bike path" that is really intended to become a major roadway, but are also wasting a great deal of the public's money in an attempt to manage the WWTP project in such a way as to support development.

Current Status of Bridge Project

According to the Morro Bay City Council Goals and Priorities 2012-2013 document, "Staff should start design and permitting process now, using USHA funds (\$100k). Staff will request USHA funding for this project when staff meets with SLOCOG staff In May 2012 for the FTIP Discussion." "SLOCOG" refers to the San Luis Obispo Council of Governments. As noted on its web site, "SLOCOG provides transportation planning and funding for the region." "USHA" refers to Urban State Highway Account.

Some residents believe it possible that City staff might convince Dynegy, current operator of the power plant, to build the bridge once promised by Duke. According to reliable sources, plans are currently being formulated by Dynegy to keep the power plant running by putting jet engines in units 3 and 4. The work on the plant would be done as an "upgrade", allegedly to bypass the full permitting process and its inherent focus on environmental issues. Sources say this project is being planned with full cooperation from City staff.

As always, thank you for your time and your attention to my concerns.

Sincerely,

Linda Stedjee Morro Bay Istedjee@charter.net

Exhibit 6 A-3-MRB-11-001 318 of 363

 From:
 Linda Stedjee [Istedjee@charter.net]

 Sent:
 Monday, June 04, 2012 9:19 AM

 To:
 undisclosed-recipients

 Subject:
 Water and Wastewater Management summit slideshow- highly pertinent to the Morro

 Bay/Cayucos WWTP replacement project

Hi,

The information in this slideshow is, I believe, highly pertinent to the Morro Bay/Cayucos WWTP replacement project. As the CCC has been telling us for some time, water reclamation is very, very important.

The presentation gives excellent information on new paradigms. Very-well-presented technical information is provided, but the presentation also includes some basic wisdom that non-technical people can understand too. For example:

"Withdrawing water from inland areas, transporting it to urban population centers, treating it, using it once, and discharging it to the coastal waters is unsustainable." and "Replacement or repair of infrastructure with the same thinking and technology used to create it, will perpetuate the problems now experienced and create new problems"

Amen to that . I think this is the crux of the whole matter.

Small print on some of the technical slides cannot be read (at least on my computer) in the format used on the page for which I have provided a link, so downloading would appear to be necessary if you want to read the fine pint. If you want to download the presentation, you have to create an account, but it appears that doing so is free.

Linda

Exhibit 6 A-3-MRB-11-001 319 of 363

From: Cavalieri, Madeline@Coastal

Sent: Tuesday, June 12, 2012 2:46 PM

To: Rexing, Stephanie@Coastal

Subject: FW: Morro Bay WWTP "briefing booklet" seriously flawed. NOTR: Copy of this communication sent to CCC staff member Madeline Cavalieri

Please print for the file.

From: Linda Stedjee [mailto:lstedjee@charter.net]

Sent: Tuesday, June 12, 2012 2:17 PM

To: mmcclureccc@co.del-norte.ca.us; mark.stone@co.santa-cruz.ca.us; richard@bloomlaw.net;

esanchezccc@aol.com; zimmerccc@gmail.com; skinsey@marincounty.org; brian.brennan@ventura.org; Cavalieri, Madeline@Coastal

Subject: Morro Bay WWTP "briefing booklet" seriously flawed. NOTR: Copy of this communication sent to CCC staff member Madeline Cavalieri

Hello,

A letter containing the information herein was sent to you via post several months ago. With the hearing on the Morro Bay WWTP project fast approaching, I would like to once again ask you to consider some serious issues regarding the content of communications you have received from Morro Bay and Cayucos staff and their lobbyist.

To many of us, the recently-published "CCC Briefing Booklet" regarding the Morro Bay – Cayucos wastewater treatment plant (WWTP) replacement project is the most bizarre attempt thus far to sway your opinion, and the opinions of members of the public. The "briefing booklet" reaches a new low, in terms of blatantly false information dispensed by Morro Bay and Cayucos Sanitary District (MBCSD) officials and staff..

While I am sure that the outrageous spin doctoring and outright falsehoods in the socalled "briefing book" have not escaped your attention, I will note some of them here, for the record.

1. <u>False Information</u>: Attempt to portray the project as an "upgrade". The very title of the booklet contains false information, in that it refers to the project as the Wastewater Treatment Plant <u>Upgrade</u> project. As you know, this is no upgrade. It is a replacement.

When it was learned, in 2009, that the current WWTP was in a flood path, project staff realized that a new plant would have to be built. Despite the fact that, three years ago, the project clearly turned from an upgrade to a replacement, MBCSD officials and staff continue to refer to the project as an upgrade. Many of us believe that this is done in an effort to avoid the more

stringent environmental rules that apply to new construction, and as part of a strategy to keep the plant in the current location – which happens to lie in a flood plain, a tsunami zone, a scenic, visitor serving area, and an area of significant archaeological artifacts and Native American burials.

2. <u>Spin doctoring</u>: Attempt to portray the MBCSD as committed to protecting the environment through its support of tertiary wastewater treatment. On page 2 of the document, it Is stated, "Morro Bay and Cayucos have <u>voluntarily</u> chosen to surpass the requirements for full secondary treatment by also including tertiary filtration into the treatment process"

I believe it is clear that no altruistic, high-minded motives can be credited to the MBCSD. First, the commitment was made under heavy public pressure, and with much argument. Second, it was just a year ago when we learned of the MBCSD's "Plan B" - a plan that involved backing out of commitments to build a plant with tertiary treatment capability in order to escape CCC permit jurisdiction. As stated in WWTP Project Manager Dennis Delzeit's April 1, 2011 staff report, "Plan B is a possible alternative that could provide full secondary treatment while being exempt from the issuance of a coastal development permit. The MBCSD staff is continuing to explore the potential concepts. Meeting all of the parameters is complex and the solution is not ready for presentation to the JPA at this time."

 Spin doctoring: Attempt to portray a past CCC decision as supporting current plant location. On page 6 of the booklet, it is stated that, "In Jan. 2009, Federal Consistency Certification CC - 007 - 06 approved for reissuance of 301 (h) NPDES modified discharge permits for WWTP and ocean outfall."

What is left out is a very critical fact. In January, 2009, it was believed that the project would be a true upgrade - an in-place refurbishing of the existing WWTP. The inherent implication was that the existing ocean outfall would still be needed. HOWEVER, when, "Morro Bay Cayucos Sanitary District Wastewater Treatment Plant Flood Hazard Analysis" was completed several months later, it was determined that the <u>existing WWTP facility was directly in the flood path, and would have to be demolished and replaced with a new one</u>.

Would the CCC have made the same decision regarding the ocean outfall, had it been known that a whole new facility would have to be built – OR – would the CCC have included some constraints aimed at enhancing water quality protection through elimination of the ocean outfall usage when the new plant was built?

4. <u>False information and spin doctoring</u>: References to and dependence on a badly- flawed alternative site "analysis". The booklet bases many of its

Exhibit 6 A-3-MRB-11-001 321 of 363

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conclusions on the Dudeck alternative site analysis which, as you know, has been the subject of many resident criticisms and complaints. I believe you have seen the residents' comments on the numerous and serious flaws in the "analysis". Therefore, I will mention only one, as an example.

One of the most blatant actions taken by the MBCSD's hired consultants was to set a standard for disqualifying potential sites through a set of "fatal flaws", and then violate their own standard. The consultants eliminated several sites that had one or more of their "fatal flaws" including the PG&E property (referred to in the consultant report as Site 8) because it lies in a flood zone.

However, they did NOT eliminate Site 1, the MBCSD's preferred site, despite the fact that it has the same "fatal flaw" as Site 8. Site1, as you know, is also in a flood plain. I will also note here that Site 8 is noticeably farther above sea level than Site 1, so is less prone to inundation in a tsunami.

Site 8 also lies in fairly close proximity to the current WWTP, and thus its use would require minimal re-routing of pipes. Interestingly, although much has been said about addressing the flooding at Site 1 through the use of fill, no similar consideration of the use of fill was made for site 8.

5. False information, missing information, and spin doctoring: Project schedule and cost misinformation. On pages 11 and 12 of the booklet are some of the most outlandish claims made thus far by the MBCSD. First, it must be noted that the "information" on this page is dependent upon the seriously-flawed alternative site evaluation, which eliminated most of the proposed sites; some for reasons just as dubious as the excuses given for NOT eliminating the MBCSD's preferred site.

The outrageous cost and project completion dates specified make little to no sense at all, and are not supported by any valid analysis. In addition to the complete failure to justify the numbers presented, there is another glaring omission.

The booklet fails to discuss alternative technologies that would allow a much smaller, technologically superior, and far less costly plant to be built – on a much smaller piece of land. PERC Water presented its capabilities to the MBCSD, and even completed, at its own expense, a customized design for a plant that can be built on any site. In the face of strong and often overt hostility from the MBCSD and their staff, and the staff's refusal to sign a standard non-disclosure agreement, PERC withdrew. However, I am sure that they did not discard the design, given their investment in it. Yet, the booklet ignores this opportunity.

Exhibit 6 A-3-MRB-11-001 322 of 363

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PERC plants occupy a much smaller footprint than old-style technology, deliver the highest-quality of treated effluent, look (and smell) like office buildings, and can be built in a couple of years. A PERC plant would cost tens of millions of dollars less than the old-style technology that the MBCSD and their consultants favor, and the firm guarantees its cost, schedule and, if hired to run the finished plant, its rates for 30 years.

The PERC technology was presented to the MBCSD in great detail, and given that the technology was brought to the attention of the consultants, its omission from the so-called analysis done by the consultants, and from the cost and schedule figures provided in the booklet, makes the missing PERC alternative the obvious "800-pound gorilla in the room".

This makes the following claim on page 12 of the booklet even more ridiculous: "Based on the analysis contained herein, it is therefore recommended that the Current WWTP (Site 1)be brought back before the CCC during its de novo review hearing as the most feasible alternative site for development of the MBCSD's WWTP facilities in accordance with its consistency with applicable City LCP and CCA policies, its ability to reduce environmental impacts to a less than significant level, and because it presents the most streamlined project implementation schedule, while being the most cost - effective option for the rate payer within the MBCSD service area."

6. <u>False Information</u>: Claims that the MBCSD's favored site is consistent with the LCP and Coastal Act policies: On page 13 of the booklet, it is stated that the site "can be found consistent with City's LCP and Coastal Act policies related to Coastal Hazards, Public Access and Recreation, Visual Resources, Archaeological Resources and Sustainability/Water Reclamation." This statement has prompted at least one resident to ask the questions, "On what planet? In what universe?"

In her comprehensive November, 2010 review of the project DEIR, the review that prompted you to take over permitting authority for the project, CCC staff member Madeline Cavalieri pointed out that, *"In short, we have identified several fundamental areas of apparent inconsistency with the LCP and the applicable policies of the Coastal Act. First, the District's proposed preferred site location appears to be inappropriate for the development proposed. The concept of locating major public works infrastructure in an area that is subject to multiple significant hazards is not consistent with the hazards policies of the LCP. Further, the location is directly adjacent to the shoreline in a visually sensitive area where such development could frustrate LCP and Coastal Act public recreational access and visitor-serving objectives, and lead to adverse public* <u>Exhibit 6</u> viewshed impacts. Finally, the area has significant archaeological resources that, as required by the LCP, must be avoided. All of these impacts could be avoided or minimized by moving the project to an alternative location."

Numerous Morro Bay and Cayucos residents have independently reached and stated the same conclusions. Yet, almost a year-and-a-half later, our local officials and staff continue to waste our money and your time in their continued desperate attempt to avoid relocating the plant.

On page 14, it is stated that there is "*low tsunami potential at Current WWTP site.*" This is likely what the builders of the inundated nuclear power plant in Japan said. The fact remains that the site is in a tsunami zone.

It is also stated that, "*In 100-year floodplain, project reduces facility footprint by 50%, mitigation feasible to reduce risk*". How does making the plant smaller reduce the risk that it will be hit by flood waters?

It is stated, "Facility improvements not affected by long - term shoreline erosion, storm surge or wave run - up, or sea level rise for a 100 - year time period (well beyond design life of project." This appears to conflict with the views of many experts. It appears that the booklet authors "chose" their sources very "carefully".

The fact remains, as Ms. Cavalieri stated, "...the District's proposed preferred site location appears to be inappropriate for the development proposed. The concept of locating major public works infrastructure in an area that is subject to multiple significant hazards is not consistent with the hazards policies of the LCP."

On page 15, it is stated, "Existing and proposed treatment plant consistent with LCP land use designation and surrounding land uses." This is a scenic, visitor serving area. How is an old-style sewer plant, with its inherent odor problems, consistent with providing our visitors with an enjoyable visit to the beach? Does this land use provide maximum benefit to visitors? How about moving the plant and building visitor-serving facilities on the current site?

On page16, in regard to visual resources, it is stated that the project is "Compatible with surrounding development" A sewer plant is compatible with a beach campground, RV parks, and a high school? I doubt that our visitors and the high school faculty and students would agree.

On page 17, it is stated that there are "no significant resources identified at Current WWTP site; site fully developed" and, "Impacts to cultural resources Exhibit 6 A-3-MRB-11-001 324 of 363 *unlikely; feasible mitigation measures and monitoring program to reduce potential risk"* This statement is in direct conflict with information provided by local Native American groups.

At the October 14, 2010 MBCSD meeting, Fred Collins, Chairman and Tribal Administrator for the Northern Chumash Tribal Council, stated that the locations of the current and future WWTP are in the middle of a Chumash village where his ancestors are buried. Both the Chumash and Salinans have confirmed that the site is a major archaeological site, and contains numerous burials.

Mr. Collins, along with representatives of the Salinan people, have clearly stated their objections to the building of the new WWTP at the MBCSD's favored site and asked to be involved in the site selection process. Their requests were ignored.

7. <u>Spin doctoring, false information, and missing information</u>: Claims regarding water reclamation. On pages 18, 19, and 20 are various claims and recommendations regarding water recycling potential and benefits.

On page 18, it is stated that, "City of Morro Bay and Cayucos area have adequate potable water supplies through State Water Project (SWP), groundwater, and local surface water to meet projected demands." This is a blatant falsehood. The City of Morro Bay's water supply is, to say the least, precarious.

More than once, the City has nearly run out of water. When State Water was cut back in 2010, the situation was dire, and the City went begging to the SWRCB for a waiver to use a Chorro Valley well in violation of an SWRCB order. As stated in communications by the City's attorneys, without use of the well, the City would have been unable to produce sufficient water to supply its water customers.

State Water Project infrastructure is fragile, as illustrated by the events in Morro Bay on Labor Day weekend, 2011. The State Water Project system went down due to mechanical failures of some of its pumps, and a simultaneous failure of some City infrastructure brought the town within hours of a major water crisis. These issues are described in the attached *Rock of the Coast article*, "Morro Bay's Unreliable Drinking Water Sources – New Concerns Emerge".

On page 18, it is also stated that, "*Recycled water cannot feasibly offset significant potable water demands*" On what data is this pronouncement based? Numerous scientists would dispute this claim, as would communities, located all over the world, where recycled water can and does offset significant potable water demands.

Exhibit 6 A-3-MRB-11-001 325 of 363 The 2009 article, "Indirect Potable Reuse: A Sustainable Water Supply Alternative", by Clemencia Rodriguez, Paul Van Buynder, Richard Lugg, Palenque Blair, Brian Devine, Angus Cook, and Philip Weinstein states, "In IPR, municipal wastewater is highly treated and discharged directly into groundwater or surface water sources with the intent of augmenting drinking water supplies" and,

"IPR is not new and has been successfully implemented in the United States (US), Europe and Singapore. In the US, California is the leading state with the highest number of IPR projects and more than 40 years experience; other states with demonstration or full-scale IPR projects include Arizona, Colorado, Texas, Florida and Virginia."

On page 18 of the booklet, it is also stated, "Significant groundwater recharge is not feasible due to limited aquifer storage capacity and high cost of advanced treatment to meet State groundwater replenishment requirements." At present, precipitation is the primary source of recharge for the aquifers. It is doubtful that the booklet authors would claim that precipitation is unnecessary to our water supply due to "limited aquifer storage capacity". It seems clear that the limited storage capacity makes additional recharge sources even more critically necessary.

Furthermore, as previously noted, PERC-style wastewater treatment plants produce effluent treated to the highest standards and ready for re-use, and can do so at a far lower cost than the alternatives listed in the booklet. This fact was left out by the booklet authors.

Also left out was important information regarding the potential for protecting water supplies and reducing potable water costs by using recycled water in "barrier wells" to prevent saltwater intrusion. According to the article "Battling Seawater Intrusion in the Central & West Coast Basins", WRD Technical Bulletin Volume 13, Fall 2007, By: Ted Johnson, Chief Hydrogeologist, "*In coastal areas where groundwater is used for potable or agricultural purposes such as the Central and West Coast Basins (CWCB), intrusion can be a serious problem resulting in the shut down of wells or necessitating expensive desalination treatment." and, "The barrier projects have been successfully protecting the fresh water aquifers in the CWCB for over 50 years. Currently, both potable water and recycled municipal wastewater treated by microfiltration, reverse osmosis, and advanced oxidation in some cases (ultraviolet light and hydrogen peroxide) are used. The water is injected into the CWCB aquifers to depths up to 700 feet."*

At present, brackish Morro Basin well water must go through a very expensive desalination process to make It potable.

8. <u>Spin doctoring and conflicting information</u>: Recommendations related to water reclamation: On page 20, it is stated that, "MBCSD should continue with proposed project to upgrade to full disinfected secondary treatment in accordance with the Settlement Agreement with RWQCB" I find this statement fascinating in light of the conflicting comment on page 2, "Morro Bay and Cayucos have voluntarily chosen to surpass the requirements for full secondary treatment by also including tertiary filtration into the treatment process" Which is it? Are they committed to tertiary treatment or not?

Also on page 20 is this recommendation: "*Pursue expansion of recycled water* system to areas immediately

surrounding the WWTP." As I have mentioned in prior communications with you, I have long suspected that the MBCSD's dogged insistence on keeping the WWTP at the current location has to do with plans for a huge development on the neighboring power plant property.

The development, sponsored by Ecobaun, is so big that no permit could possibly be granted unless a new and substantial long-term water supply could be established. In fact, large-scale development for nearby Pismo Beach was recently rejected by the local LAFCO due to water supply concerns. The unreliability of State Water was cited by LAFCO personnel.

I believe that the effluent from the new WWTP has been "earmarked" for use by the proposed power plant property development. This explains not only the insistence on the current location, but the apparent push to go back to secondary treatment.

If our new WWTP were located elsewhere, it would be more difficult to sell the idea of sending the treated effluent to the power plant site, and the developers would have to pay for the necessary infrastructure. If our new WWTP produced water ready for re-use, there would be pressure to use it to benefit residents. However, if the effluent only got secondary treatment, sending it to the neighboring power plant property might be presented as a great way to "dispose" of it.

In short, I believe that the booklet statement, "*Pursue expansion of recycled water system to areas immediately surrounding the WWTP*" clearly reveals the real reasons for all of the expensive nonsense to which the MBCSD has subjected you and local residents.

I ask that you consider what parties could potentially benefit financially from the proposed power plant development project, and factor your conclusions into your Exhibit 6 A-3-MRB-11-001 327 of 363

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review of the issues at hand.

On page 23, the booklet states the conclusion "*Current WWTP site determined to be least environmentally impactful of all sites considered and can be found consistent with City's LCP and Coastal Act policies*" Nonsense.

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Please consider the potential "profit motives" of various individuals and organizational entities behind the spin doctoring and outright falsehoods in the "briefing booklet. Then, in concert with the wise counsel of your own staff, please instruct the MBCSD to construct its facilities on a more appropriate site, with full water reclamation capabilities, using the most advanced, lowest cost technology.

Linda Stedjee Morro Bay

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Exhibit 6 A-3-MRB-11-001 328 of 363

6/13/2012

From:Carl, Dan@CoastalSent:Tuesday, June 12, 2012 11:49 AMTo:Craig, Susan@Coastal; Rexing, Stephanie@CoastalCc:Cavalieri, Madeline@CoastalSubject:FW: Please call me about Morro bay

For file.

----Original Message----From: John Diodati [mailto:johndiodati@yahoo.com] Sent: Friday, June 08, 2012 9:06 AM To: Cavalieri, Madeline@Coastal; Carl, Dan@Coastal Subject: Please call me about Morro bay

Good Morning Everyone,

I sincerely hope that you all recognize for the last few years I have been extremely respectful of your time, and have purposely limited my calls and emails to you. As a gov employee in a fast-paced work environment I know you cannot be constantly distracted with inquiries and trivial questions. However, what happened in Morro Bay on Tuesday was not a trivial matter and I am appealing to you to please call me so we can discuss the project's fate over the next few months.

On Tuesday, three council candidates made history by being the first candidates EVER to obtain a majority in the June primary. All three candidates were endorsed by the local paper, which cited their willingness to work with the Coastal Commission on alternative sites for the WWTP.

Sitting council member Noah Smukler, who was always been the sole vote on trying to review alternative sites, earned a whopping 63% of the vote.

Christine Johnson, whose husband is an appellant of the project, received 54% of the vote. With 4 council candidates running, it is not easy to obtain a majority. However, you should know the other two candidates had said publicly they would not move the sewer, and both Noah and Christine each received more votes than these two candidates COMBINED !

Jamie Irons, one of the planning commissioners who denied the issuance of the WWTP's CDP, was elected mayor with 53% of the vote. He also had to do this against 3 other candidates. One candidate was Bill Yates, the current mayor, and the other was Carla Borchard, a current city council member. Both had been vocal that the WWTP was not going to move. Jamie also received more votes than both of these two candidates combined!

The community was very aware of the issues, and the voter turnout was 58.1%. Countywide turnout was only 46% and statewide cities were breaking records for low turnout. Morro Bay showed up for this issue.

Please call me at any time on any day to discuss the WWTP. I believe the JPA members in cayucos are at risk as well in November, which would make an entire new JPA board representing the communities on their number one issue. It would be a travesty for the Commission to act on the project 4 months before the communities were able to have their real voice represented.

Thanks. John. 805-215-4177

Sent from my iPhone

From: Linda Stedjee [Istedjee@charter.net]

Sent: Wednesday, June 13, 2012 9:27 AM

To: mmcclureccc@co.del-norte.ca.us; mark.stone@co.santa-cruz.ca.us; richard@bloomlaw.net; esanchezccc@aol.com; zimmerccc@gmail.com; skinsey@marincounty.org; brian.brennan@ventura.org

Cc: Cavalieri, Madeline@Coastal; Craig, Susan@Coastal; Rexing, Stephanie@Coastal

Subject: Newly-elected Morro Bay City Council majority vows cooperation with Coastal Commission on WWTP project COPY SENT TO CCC STAFF

Hello,

NOTE: A COPY OF THIS MESSAGE WAS SENT TO CCC STAFF

Various public issues were on voters' minds in the the June 5, 2012 Morro Bay primary election, but the biggest one was the WWTP project. It will be the most expensive project ever undertaken in the town

The landslide victories of Jamie Irons, Christine Johnson and Noah Smukler are clearly a mandate from voters. The three winning candidates were the ONLY candidates who pledged to cooperate with the CCC. They were the ONLY candidates who stated that they are open to any plant location that CCC staff and Commissioners deem appropriate, and the ONLY candidates who stated that they strongly support wastewater reclamation and would like to see a better evaluation of alternate sites.

The message sent by voters on June 5 was loud and clear. They do not like how the current Council majority has been running the city, and in particular, how they have been handling the WWTP project.

In stark contrast to the winners, the defeated candidates had openly stated their unwillingness to consider the recommendations of CCC staff for a more suitable plant location and for significant wastewater reclamation, and stated their determination to keep pushing for their own preferred plant location. Those defeated in the election include current mayor Bill Yates and current City Council member Carla Borchard, both of whom were running for mayor, and Joan Solu and Jim Hayes, were running for City Council. Solu and Hayes espoused the same positions on the WWTP project as Yates and Borchard.

At numerous public meetings, large numbers of Morro Bay residents have pointed out the serious flaws with the current WWTP project and asked that it be moved to a more appropriate location. They have asked repeatedly for cooperation with the CCC. They have asked repeatedly for water reclamation to be included in the project, and they have asked for more advanced technology, but their words fell on deaf ears.

The current Mayor, Yates, and the majority of current Council members, Borchard, Leage and Nancy Johnson (not to be confused with newly-elected Christine Johnson) continued to support the badly-flawed project that would put the new plant adjacent to the old one, use antiquated technology, and include little, if any water reclamation. Only Noah Smukler, who was re-elected to the Council in the June 5 primary, supported taking a cooperative and collaborative approach to working with the CCC.

Exhibit 6 A-3-MRB-11-001 330 of 363 Here is some additional information on the election winners and their margins of victory (final vote counts will be slightly different; as of this writing, there are 62 votes, mainly provisional ballots, remaining to be counted):

Mayoral race: Their were four candidates running. Mayor-elect Jamie Irons has 2062 votes. Irons has never run for any Morro Bay elected office before. The next-highest vote getter, Carla Borchard (a current City Council member) has 814 votes, and the current mayor, Bill Yates has 786. A fourth candidate has 211 votes. I believe that this is a clear testament to the fact that voters are not happy with the performance, attitudes, and direction of Borchard and Yates. Irons got more votes than all three defeated candidates, plus write-in votes, taken together.

Council race: There were two City Council seats open, and four candidates running. Council member Noah Smukler was re-elected and currently has 2,527 votes. Smukler has consistently supported cooperation with the CCC, water reclamation, and a better alternative site analysis. New Council member Christine Johnson received 2,167 votes. She has never run for Morro Bay elected office before. She will replace Borchard, who gave up her seat to run for mayor. The two losing City Council candidates, who are closely allied with defeated mayoral candidates Borchard and Yates, lagged far behind. One, Joan Solu has 1163 votes and the other, James Hayes, has 904.

Ordinarily, there would be a November runoff, but because the number of votes received by each the winners was over 50% of the ballots cast in the election, they were elected in the primary.

Below this message is an excerpt from a June 13, 2012 news article that addresses some of the issues.

Thank you for your attention to my concerns.

Linda Stedjee Morro Bay resident and voter

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Excerpt from a June 13, 2012 San Luis Obispo Tribune article. Full article, written by journalist David Sneed, available at <u>http://www.sanluisobispo.com/2012/06/12/2102942/morro-bays-newly-elected-look.html</u>

The victors in the June 5 election, who will be sworn in officially in December, will face the challenge of bridging a long-standing divide between tourism-related and business interests, and environmental and quality-of-life concerns. They say residents should look for several changes in the way the city is managed, including:

• More consensus-building and listening to constituents and less factionalism.

• A greater emphasis on developing and diversifying the economy while allowing the Chamber of Commerce to focus its attention on tourism promotion.

• Working more cooperatively with the Coastal Commission, a powerful state agency that has a say in many of the city's land-use issues.

However, the new majority on the council will not be sworn in for nearly six months.

During that time, the current council will have to make decisions on several issues that will impact Morro Bay for decades to come.

These include a \$34 million upgrade to the city's sewage treatment plant, negotiating with the energy company Dynegy over the fate of the Morro Bay power plant and the budget for fiscal year 2012-13.

"How this council manages those decisions will set the tone for what the next council will be working with and doing," Smukler said. "It's important we keep the community's best interest in mind and not make decisions based on the political shift that may be coming."

The upgrade of the wastewater treatment plant is Morro Bay's most immediate concern. Over the objections of Coastal Commission staff, the City Council wants the new treatment plant to be built where the current plant is in order to save money.*

The newly elected council members want to work with the commission to look at alternative locations away from the ocean for the treatment plant. The commission is scheduled to decide the issue in August.

"If the Coastal Commission approves the current location, we'll move ahead with that," Irons said. "If that doesn't happen, we'll need to start looking at alternatives."

emphasis added

*most people do not believe the claims that saving money has anything to do with it. Along with many others, I believe that in the end, a better technical approach and a better choice of contractors will save a great deal of money over the currently-proposed approach

Exhibit 6 A-3-MRB-11-001 332 of 363

6/15/2012

From:	Richard E.T.	Sadowski	[r.e.t.sadowski@gmail.com]	
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Sent: Thursday, June 14, 2012 10:45 AM

- To: mmcclureccc@co.del-norte.ca.us; mark.stone@co.santa-cruz.ca.us; richard@bloomlaw.net; esanchezccc@aol.com; zimmerccc@gmail.com; skinsey@marincounty.org; brian.brennan@ventura.org
- Cc: Cavalieri, Madeline@Coastal; Craig, Susan@Coastal; Rexing, Stephanie@Coastal; skyli.mcafee@calost.org; Fischer, Jim; secretary@resources.ca.gov; csarte@calepa.ca.gov; Roberta Cordero; Lisa DeBruyckere; Hallenbeck, Todd R.

Subject: Morro Bay / Cayucos WWTP Project

June 14, 2012

Dear California Coastal Commissioners:

It has come to my attention that some of you are entertaining a decision to allow the new Morro Bay/ Cayucos WWTP (MB/Cay WWTP) project to be built in it's current location. It can not be overstated why this current location is unacceptable and should not even be on the table for consideration, Here are just a few obvious reasons;

- California ocean policies are addressing Sea Level Rise (SLR) and climate change.
- Due to it's current location, The MB/Cay WWTP and it's associated dilapidated and leaking sewer collection infrastructure are polluting the Morro Basin drinking water aquifer.
- The MB/Cay WWTP ocean outfall easement has been overburdened for over 40 years due to the continual issuance of waivers from complying to the Clean Water Act. The time for using Estero Bay as a colostomy bag must end, and full water reclamation the new standard.
- The severe H2S problem in North Morro Bay created by the Cayucos Sanitary District collection and conveyance systems are continually being ignored by local staff and the regional Air Quality Board. (I have personally performed test and reported this issue while employed for the CSD)
- The current WWTP is located on sensitive archeological land.

Included with this e-mail (below) is comments that were sent to the California Ocean Protection Council with regards to their Strategic Five Year Plan. Contained in the comment letter is a more detailed explanation regarding the need to relocate the MB/Cay WWTP. A viable option is to relocate the MB WWTP approximately 1.5 miles east along HWY 41 (Atascadero Road) where there currently exists a small WWTP servicing a mobile home community. From my experience and the flow study that i did while working for the CSD i estimate the design capacity to be approximately 5 MGD Peak Dry Weather Flow for this part of the city. This location is suited for water reclamation use by adjacent farming operations.

In order to elevate the H2S issues mentioned above, a separate smaller package WWTP could be built on the northern part of the city limit where the CSD's two primary sewer gravity lines discharge raw sewage into the Morro Bay city limits. Currently, all of the CSD's sewage is collected at the Lift Station 5, which is in the Morro Bay city limits, and than pumped over to north Morro Bay approximately 2 miles. My flow study estimated the design capacity needs for this area to be 2 MGD Peak Dry Weather Flow. This data was made available to the CSD Board back in 2004. During that time Morro Bay city staff was also notified of these issues and concerns.

Comment Letter to the OPC:

http://www.opc.ca.gov/webmaster/ftp/pdf/public comment/20120116 RSadowski email.pdf

Respectfully,

Richard E.T.Sadowski B.S. Mechanical Engineer Grade IV Wastewater Collection System Operator

> Exhibit 6 A-3-MRB-11-001 334 of 363

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From: Linda Stedjee [Istedjee@charter.net]

Sent: Saturday, June 23, 2012 7:31 AM

Subject: Sea level rise and other factors TOGETHER could increase flooding at proposed Morro Bay WWTP site 1 beyond what has been estimated - and within the plant's life expectancy

Hi,

A claim made in the CCC "Briefing Booklet" for the Morro Bay-Cayucos WWTP project bothers me for more than one reason. The booklet says,

"Facility improvements not affected by long - term shoreline erosion, storm surge OT wave run - up, OT sea level rise for a 100 - year time period (well beyond design life of project."

(emphasis added)

In using the word "OT", the authors seem to be looking these problems separately, and not considering the possibility that they might work together, resulting in a compound effect much worse than might be expected from one of them alone.

I started out wondering if the effects of the rise in sea level could exacerbate the impacts of flooding from rivers and streams in the areas very close to the ocean. I am no geologist and no water expert, but I found some information online that may indicate that the effects of high levels of water in Morro Creek might be compounded by higher sea levels. I also found some other information that I think may be very pertinent to our concerns for proposed plant site 1.

This first item refers to a USGS study. If, as the study indicates, higher sea levels cause higher ground water levels in coastal areas, then it seems to me that water in streams - like Morro Creek - has less room to percolate down into the ground, and thus more of it would stay on the surface. That would seem to indicate that if sea levels rise 6 inches here by 2030, as predicted in a Tribune story published yesterday, then in a time period way shorter than the 30-year life of the plant, we could have the chance of way worse flooding from Morro Creek than has has been predicted.

http://www.climatecentral.org/blogs/sea-level-rise-may-raise-groundwaterlevels/

Why Groundwater is Another Sea Level Rise Concern

Quote from article:

Sea level rise brings to mind the threat of coastal flooding from menacing storm surges, with growing risks to shore-based infrastructure — but a <u>new study</u> indicates there's another sea level rise-related threat that has so far slipped under the radar.

According to the study, as sea level rises, so will groundwater levels, and since underground infrastructure — including sewer pipes and utility equipment — was built with historical

> Exhibit 6 A-3-MRB-11-001 335 of 363

groundwater levels in mind, this could lead to expensive headaches for coastal communities.

This next item addresses sea level rise and storm surge, and provides a concrete example. The two storms are many years apart, but it is my understanding that very rapid sea level rise is a relatively recent problem, and this would seem to indicate that it is recent changes that caused the effect described. As sea level continues to rise at a rapid rate, so, it would appear, does the risk of WWTP Site 1 being seriously flooded by storm surge. Take that and add in the impacts of higher ground water on Morro Creek and, well, you get the picture.

Virginia Institute of Marine Science http://www.vims.edu/research/units/programs/icccr/ docs/coastal_sea_level.pdf

Quote from article:

Consequences of Sea Level Rise The impact of sea level rise on coastal flooding is amply demonstrated by comparing Hurricane Isabel of 2003 with another major storm: the hurricane of August 1933, widely regarded as the "storm of the century" for Hampton Roads. The 1933 hurricane was more powerful than Isabel and produced a storm surge (rise in water level due to the effects of the storm) of 1.8 m (5.8 feet) as compared to 1.5 m (4.8 feet) for Hurricane Isabel in Hampton Roads. Yet the maximum water level or storm tide (sum of the storm surge and the astronomical tide) for both storms was about the same: 2.4 m (8.0 feet) for the 1933 hurricane and 2.4 m (7.9 feet) for Isabel. 5 The reason the weaker of the two storms produced an equivalent storm tide is that monthly mean sea level during Isabel stood about 0.43 m (1.4 feet) higher than the monthly mean during the August 1933 hurricane. Most of the difference is due to sea level rise during the 70 years between these two storms.

Here is something else I found regarding storm surges and 100-year floods

Climate Central http://slr.s3.amazonaws.com/SurgingSeas.pdf

Quote from article:

Rising seas dramatically increase the odds of damaging floods from storm surges. For over two-thirds of the locations analyzed (and for 85% of sites outside the Gulf of Mexico), past and future

global warming more than doubles the estimated odds of "century" or worse floods occurring within the next 18 years—meaning floods so high they would historically be expected just once per century. For over half the locations analyzed, warming at least triples the odds of century-plus floods over the same period. And for two-thirds the locations, sea level rise from warming has already more than doubled the odds of such a flood even this year.

Here is that Tribune article I referred to:

http://www.sanluisobispo.com/2012/06/22/2116658/report-calif-to-get-seasrising.html

Report: Calif. to get seas rising 6 inches by 2030

By JEFF BARNARD | AP Environmental Writer

The West Coast will see an ocean several inches higher in coming decades, with most of California expected to get sea levels a half foot higher by 2030, according to a report released Friday.

The study by the National Research Council gives planners their best look yet at how melting ice sheets and warming oceans associated with climate change will raise sea levels along the country's Pacific coast. It is generally consistent with earlier global projections, but takes a closer look at California, Oregon and Washington.

Although the 6 inches expected for California by 2030 seem minor, the report estimated that sea levels there will be an average of 3 feet higher by 2100. About 72 percent of the state's coast is covered by sandy cliffs, and the rest include beaches, sand dunes, bays and estuaries.

Seaside cliffs will be cut back about 30 yards over the next 100 years, and sand dunes will be driven back even more, said Robert A. Dalrymple, a professor of civil engineering at Johns Hopkins University and chairman of the group that wrote the report. After about 50 years, coastal wetlands will eventually be overwhelmed without new sources of sand or room to move inland.

That could be problematic in Northern California, though, since dams hold back about a third of the sand that once washed into the sea there from the Klamath River, the report noted.

Northern California, Oregon and Washington can expect a less dramatic increase - about 4 inches by 2030 and 2 feet by 2100 because seismic activity is causing land to rise north of the San

Andreas Fault, offsetting increasing sea levels, and drop south of it. The fault runs out to sea at Cape Mendocino.

Oregon has the advantage of tough basalt formations on much of the coast, but long stretches of Washington are low-lying sandy beaches.

"Anything close to the seas is vulnerable," Dalrymple said.

Sea levels rise for two reasons due to global warming. Warmer water expands, which can cause as many as 23 inches of sea level to rise by 2100, according to the Nobel Prize-winning Intergovernmental Panel on Climate Change. Warmer temperatures also cause ice sheets in Greenland and west Antarctica to melt, adding another foot or more to sea levels by 2100, scientists said.

Those estimates, however, were for the planet as a whole. Some places will see higher seas, while others will get less dramatic increases.

Globally, sea levels have risen about 8 inches over the last century, but the rate is increasing significantly, said Gary Griggs, one of the scientists assembled to produce the report.

The most immediate threat over the next few decades will come from periodic ocean-warming El Nino events, said Griggs, who also is the director of the Institute for Marine Sciences at the University of California at Santa Cruz.

"During those events, sea level is elevated as much as a foot above normal and then we've got typically larger waves coming in with the high tides," particularly in the Northwest, he said.

Storms during El Ninos in 2009 and 2010 ate away 40 feet from cliffs on the ocean side of San Francisco, leaving paved parking lots hanging over the void, said Ben Grant of the San Francisco Planning and Urban Research Association. The organization is promoting a strategy that would allow the ocean to have its way in some areas, shield others with rocks, and dump new sand to maintain beaches.

The report noted that some computer models suggest storms will be stronger as global warming progresses. But Dalrymple said there was no clear consensus in scientific literature, and data from buoys don't go back far enough to conclude that wave sizes were continuing to grow in the Northwest.

If a major earthquake occurs beneath the Pacific Ocean off Oregon and Washington, in what is known as the Cascadia subduction zone, that would cause the land to drop, allowing sea level to rise another 3 to 6 feet immediately, the report said. Such a major

temblor occurred 300 years ago, but becomes more likely as time passes.

In Long Beach, Wash., a town on a sandy spit at the mouth of the Columbia River, residents are more concerned about the prospects of a tsunami from such an earthquake, Mayor Bob Andrew said.

A dune separating the town from the ocean has been growing in recent years, making sea level rise less of a concern, he said.

The report was commissioned by states and federal agencies looking for detailed information so they can plan for an accelerated rate of erosion along beaches, bluffs and sand dunes that are already crumbling into the sea. In Oregon, Greg Sieglitz, a monitoring program manager at the state Watershed Enhancement Board, said they helped sponsor the study to help them evaluate land purchases of coastal wetlands.

The report differed slightly from projections currently used by California officials, with the newer study estimating lower sea levels in 2100. The study summarized published projections and updated it with an analysis of tidal gauge readings and satellite measurements along specific sites on the West Coast.

Susan Hansch, chief deputy director of the California Coastal Commission, said that "a lot of the data we had before was worldwide data or has the caveat, 'Can't be used for planning purposes."

"It all comes down to the better data you have, the better decisions you can make," she said.

Linda

Exhibit 6 A-3-MRB-11-001 339 of 363

From: Linda Stedjee [Istedjee@charter.net]

Sent: Tuesday, June 26, 2012 12:19 PM

Subject: As of now, no letter submitted by Blakeslee to CCC regarding Morro Bay WWTP Hi,

A friend of mine has been communicating with Blakeslee aid Hans Poschman. Yesterday, my friend received this email message.

As of now we have not submitted a letter regarding the project. I would be happy to talk to you about it.

Poschman did not think that Morro Bay City Attorney Rob Schultz had even met with Blakeslee, as the Delzeit staff report indicated. He thought Schultz probably met with someone else, but he has not yet confirmed that with anyone I know.

My friend has sent Poschman some materials aimed at discouraging the sending of any letter in favor of the project.

Linda

Exhibit 6 A-3-MRB-11-001 340 of 363

From: Richard E.T. Sadowski [r.e.t.sadowski@gmail.com]

Sent: Wednesday, June 27, 2012 9:42 AM

- To: mmcclureccc@co.del-norte.ca.us; mark.stone@co.santa-cruz.ca.us; richard@bloomlaw.net; esanchezccc@aol.com; zimmerccc@gmail.com; skinsey@marincounty.org; brian.brennan@ventura.org
- Cc: Cavalieri, Madeline@Coastal; Craig, Susan@Coastal; Rexing, Stephanie@Coastal

Subject: Morro Bay / Cayucos Sanitary District WWTP Financial Concerns

June 27, 2012

Dear California Coastal Commissioners and Staff;

A major concern that the proponents for keeping the Morro Bay/ Cayucos WWTP in it's current location is that moving the plant will be excessively expensive. Clearly, moving the Morro Bay/Cayucos Wastewater Treatment Plant (MB/Cay WWTP) will be expensive. However, I believe that the cost data that has been presented by proponents of keeping the current plant site is insufficient to support a good decision, and ignores important facts.

To me, there are three critical factors that we need to look at:

1. The benefits of doing it right the first time

2. The potential to offset a sizable portion of the costs with a plan for developing the beachfront property where the current plant lies, and the adjacent property where some City officials and staff want the new one.

3. The significant potential savings that lie in construction of a plant using the kind of technology that was proposed by PERC Water.

Do it right the first time:

There is no question that building the right plant in the right location will result in long-term savings. Taking the easy path may be cheaper now, but it will most certainly be expensive later. This fact was summed up by a Morro Bay resident in a recent letter to the editor of a local paper:

"The current Council majority is determined to mire the "upgrade" of our Wastewater Treatment Plant in old technology and on the same site it now exists, a site that does not have the capacity to handle full tertiary build-out.

The WWTP is one of the most important factors of our infrastructure and its longevity needs to be measured in decades, not years. Using all means possible to maintain the plant at its present site, this Council majority refuses to recognize the long term consequences of climate

> Exhibit 6 A-3-MRB-11-001 341 of 363

6/27/2012

change, rising sea levels, unchecked population growth, and potentially, a diminishing water supply.

Their reasoning behind this inferior choice is it will be cheaper and will, therefore, keep the costs to the present rate payer as low as possible; but they do so without the completion and insight of a "financial cost benefit," giving no solace for the high costs that will be inherited by the next generation who will have to remedy this Council's lack of foresight."

Potential to Offset Costs

The current plant and the proposed site for the new one are on prime beachfront land. The potential for development of profitable visitor-serving facilities is tremendous. I believe that this opportunity must be fully explored to determine the extent to which WWTP costs could be offset.

The site is near Highways one and 41, the primary routes used by visitors to Morro Bay, near downtown Morro Bay, and just across the road from a beautiful beach that extends to Morro Rock to the south, and past Cayucos, to the north. Adjacent to the plant is an RV park and a beach campground. Clearly, the area is ideal for recreation.

Potential Cost Savings from a Different Technology

The current Morro Bay City Council and Cayucos Sanitary District (CSD) Board majority and their staffs had an opportunity to save about \$10 million dollars when PERC Water presented its advanced and proven WWTP technology. Yet, they not only turned down PERC's proposal; they were overtly and covertly hostile.

According to my research, PERC Plants can be built on less than an acre. They have no odor, and have reportedly been mistaken for office buildings. They can be built in less than two years. They deliver full-tertiary treated effluent.

Exhibit 6 A-3-MRB-11-001 342 of 363

6/27/2012

PERC guarantees plant cost and schedule. This approach differs significantly from that of the vendors the City and the CSD appear to favor. Those vendors offer no guaranteed final costs, and many of us believe they would be essentially given a blank check, with final costs for a WWTP far exceeding their original estimates.

I believe that it is clear that if the City Council, CSD Board, and their staffs sincerely wanted to cut costs, they would have jumped at the PERC option. Instead, they fought it.

Since PERC did a customized design plan for a plant for Morro Bay, at its own expense, it should be easy to determine what the firm's current cost estimate for a plant would be.

In addition to the above mentioned economical concerns, the cost that the local citizenry have and continue to spend on legal, consultant and lobbing services hired by the city's and the sanitary district's staff have been in the millions. It must be noted, while i was employed at the Cayucos Sanitary District (CSD), i had brought up several of these issues and concerns regarding this project back in 2004; such as the fact that the current and proposed WWTP has insufficient capacity and the need to address the deplorable condition of the sewer collection and conveyance system.

Thank you for your time and attention regarding this critical public health matter.

Respectfully, Richard E.T.Sadowski,

> Exhibit 6 A-3-MRB-11-001 343 of 363

6/27/2012

From: Linda Stedjee [Istedjee@charter.net]

Sent: Tuesday, July 10, 2012 7:28 AM

Subject: Morro Bay water supply issues - more evidence of the need for wastewater reclamation Hi,

I was recently asked whether I believe that the City of Morro Bay can serve the needs of its water customers without violating the terms of its Chorro Valley municipal well permits - something that is much more than just a legal issue. To support analysis to determine whether that is possible, I gathered, organized and analyzed some data. I do not have the answer, but believe that the following information will be useful to those with the right expertise. I believe it is critical that we determine our true position and vulnerabilities in regard to our water supply, and take action to ensure that the City can always provide water to its customers responsibly - that is, without negatively impacting the environment and other users of the aquifers. State water is going to be less and less reliable, despite unsupported claims made by City staff, and we need to ensure a sustainable supply.

Worst Case Scenario

I believe it is clear that, to meet demand without violating permit restrictions, the City must be able to provide sufficient water for its customers when three critical conditions occur simultaneously:

- <!--[if !supportLists]--><!--[endif]-->1. It is July, historically the month with highest water usage. Over last five years, usage has consistently been highest in July, ranging from 49,491,000 gallons in July, 2009 to 41,216,000 gallons in July, 2011. Daily usage on average ranged from 1,596,483.9 to 1,329548.4
- <!--[if !supportLists]--><!--[endif]-->2. Chorro Creek is dry or has minimal surface flow and the Chorro Valley wells cannot be legally used. In general, in mid-and late-summer, the Chorro Basin wells cannot be used because surface creek flow is under 1.4 cfs the minimum flow specified in permit conditions.
- <!--[if !supportLists]--><!--[endif]-->3. State Water is unavailable due to infrastructure malfunction or severe cutbacks

This is, I believe, a "worst case scenario" in terms of the City's ability to deliver sufficient water to meet demand. I believe that, if the City cannot meet demand when these three conditions occur simultaneously, it will have no recourse but to violate Chorro Valley well permit conditions and thus harm the environment and other aquifer users.

On Labor Day weekend, 2011, things were even worse - a City desalination plant equipment failure coincidentally occurred at the same time as a major State Water Project infrastructure failure. However, a comprehensive, well-executed maintenance and testing plan, should enable the City to avoid major disruptions in future desalination plant operations, so plant equipment failure was not included in the set of conditions above.

Are Alternative Sources Sufficient to Meet Demand?

I believe that the key questions generated regarding this scenario are:

<!--[if !supportLists]--><!--[endif]-->1. Can the City produce 1,596,483.9 gallons of water per day by processing Morro Basin well water and seawater through the desalination plant?

<!--[if !supportLists]--><!--[endif]-->2. For how long can the City's desal plant produce adequate water supplies without draining the Morro Basin aquifer and/or exceeding its annual diversion limit for that aquifer?

The "recovery rate" for the BWRO trains used to treat well water is 75%. I believe that the two BWRO trains each can produce 450 gpm, and the SWRO facility can produce about 400 gpm, but this must be verified.

There are 1440 minutes in a day, so if the total capacity turns out to be 1300 gpm, then the total amount that the desal plant could turn out in one day would be $1440 \times 1300 = 1,872,000$. That is clearly more than 1,596,483.9.

However, I would assume that the operation must be shut down for maintenance on a regular basis, reducing the actual daily production. In addition, like the Chorro Basin aquifer, the Morro Basin aquifer is likely to have limited water available in July. The impact of these factors is unknown to me.

It should also be noted that there are some potential issues regarding the desal plant's disposal of brine waste. Currently, the plant uses the power plant outfall, and is "piggybacked" into the power plant's permit. If the power plant goes away, where will the desal brine waste be disposed of? Could they use the WWTP outall? Maybe, but if the WWTP is moved, that outfall will most likely be decommissioned unless a new permit could be obtained.

I believe that use of the desal plant to treat Morro Basin well water could potentially be eliminated if the nitrate problem were eliminated. I, along with a number of others, believe that the nitrates are very clearly from sewage leaking from the Main Street trunk line, and NOT from agriculture, as has been claimed. You can see a presentation of the evidence here: http://www.rockofthecoast.com/2012/02/13/rock-research-leaking-sewage-not-agriculture-may-be-source-of-nitrate-problem-in-morro-bay-city-wells/ With the nitrate problem solved, the Morro Basin well water could go directly into the City water system - saving both money and water (the desal plant process for the well water has only a 75% recovery rate; the remainder of the water going into the system becomes part of the waste that is disposed of.)

What Impact Would Wastewater Reclamation Have?

Now, suppose that we had a successful wastewater reclamation program in place to recharge the Chorro Basin aquifer. Could this keep the Chorro Basin aquifer water levels high enough that the surface flow in Chorro Creek would be sufficient to allow use of the Chorro Basin wells within permit limits, even during the dry summer and early fall months?

I do not have the expertise to perform the analysis necessary to answer this question. However, I do know that precipitation is the primary form of recharge for the Chorro Basin aquifer, and the degree to which that source could be supplemented with reclaimed wastewater could potentially be very significant, and extend the period during which significant amounts of water could be produced by the Chorro Valley wells without violation of permit conditions.

Background Information/Data

Groundwater Annual Diversion Limits, per Urban Water Management Plan

Exhibit 6 A-3-MRB-11-001 345 of 363

Morro Basin: 581 acre feet - 189,319,680 gallons Chorro Basin: 1,143 acre feet - 372,448,183 gallons

Total: 561,118,663.6 gallons

Additional Diversion Limits

Chorro Basin: Diversions must cease when when downstream surface flow is under 1.4 cfs and/or when diversions are causing negative impacts to specific users, as defined in SWRCB decision 1633

Chorro Basin Well shutdown

Chorro Basin Ashurst wells are currently shut down per order by the CDPH. Regardless of whether reclamation is in place, they cannot be used until the CDPH is satisfied that its conditions have been met.

5 Years of Actual Annual Water Usage, from Morro Bay Water Production Reports

Notes: 1. R/O refers to water processed in desal plant – source is Morro Basin wells and/or seawater

2. Amounts are in gallons

2011

Morro Basin	180,000
Chorro Basin	4,592000
R/O	27,339,200
State Water	372,679,000
Total:	404,790,200

Month of highest usage: July, 41,216,000

2010

Morro Basin	15,807,300
Chorro Basin	23,984,000
R/O	84,084,000
State Water	284,456,000
Total:	408,331,300

Month of highest usage: July, 42,715,000

2009

 Morro Basin
 3,601,000

 Chorro Basin
 80,575,000

Exhibit 6 A-3-MRB-11-001 346 of 363

R/O	21,666,000
State Water	348,309,000
Total:	454,151,000

Month of highest usage: July, 49,491,000

2008 totals

Morro Basin	0
Chorro Basin	58,229,000
R/O	9,105,600
State Water	382,459,000
Total:	449,793,600

Month of highest usage: July, 47, 143,000

2007 totals

Morro Basin	42.100
Chorro Basin	90,065,000
R/O	6,208,000
State Water	363,582,000
Total:	459,897,100

Month of highest usage: July, 47,526,000

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 347 of 363

From: Linda Stedjee [Istedjee@charter.net] Sent: Wednesday, July 11, 2012 2:19 PM

Subject: Fwd: Morro Bay water supply issues - more evidence of the need for wastewater reclamation Hi,

When the message below this one was sent out, I was not sure of the total production capacity of the desal plant. I found some numbers in a County document but was not sure they were reliable. I have asked City staff for the information and yesterday, I got this response from Rob Schultz:

The desalination process can produce roughly 645 acre feet of water per year (just under 400 gpm). The brackish treatment system has the ability to treat approximately 675 gpm or about 1100 acre feet per year with both trains running.

Doing the math, I get,

575,819 gallons per day capacity for the SWRO processing 972,000 gallons per day for BWRO processing 1,547,819 gallons per day total

This is considerably less than the amount I had previously calculated, using numbers from the other source, which indicated that the BWRO trains could produce closer to 900 gpm.

As you may recall, from the historical data in past City water production reports, I found that in the last five years, the highest daily water usage for the City occurred consistently in July, and the high end of the range was 1,596,483.9. THAT IS MORE THAN THE TOTAL DESAL PLANT CAPACITY NOTED ABOVE, AND IT IS JUST AN AVERAGE. THERE WOULD HAVE BEEN DAYS WITH EVEN HIGHER USAGE. Also, since the year in which that peak July usage occurred was 2009, I believe (am not 100% sure) that we already had some mandatory water conservation measures in force. Had we not, the usage might have been noticeably higher.

What this means, in my opinion, is that if State water ever goes out in July, and we don't have a LOT of water stored in tanks, and we have not set up wastewater reclamation to continuously recharge the Chorro aquifer, then we will have to use the Chorro Basin wells in violation of a key permit condition (can't use the wells if downstream surface flow is under 1.4 cfs). That is not only illegal, but it does significant environmental damage and hurts other users.

While sea water is unlimited, how long we could continue taking 972,000 gallons of water per day from the Morro Basin aquifer, especially in the dry season, clearly would be an issue. Thus, if a summertime State Water outage continued for a long period, and the Morro Basin well output began to decrease, the Chorro aquifer would become an increasingly critical source of water - which means that the violation of

> Exhibit 6 A-3-MRB-11-001 348 of 363
the Chorro well permits would potentially grow worse through the duration of a major State water outage.

Obviously, reclaimed water could be used to recharge either or both aquifers. Which would be the most practical must be determined by someone with a lot more expertise than I have. However, I think that the bottom line here is clear - given the known reliability issues with State water, we are "living on the edge" with regard to the water supply, and we need to take reclamation very seriously.

According to the Dudek water recycling study (the conclusions of which, by the way, I believe cannot be taken seriously),

The current proposed project includes provisions for future upgrades to produce up to 0.4 mgd (448 AFY) of Title 22 disinfected tertiary recycled water for unrestricted reuse. Improvements would include installation of approved filtration process (proposed as cloth disk filters), expanded chemical facilities, reconfiguring the existing chlorine contact basin to provide minimum 90 minute modal contact time, installation of instrumentation and controls for process monitoring, and recycled water pump station.

Were all of the reclaimed water used to recharge the aquifer (s) I have no idea how much it would improve our ability to use the wells, but I suspect the improvement would be considerable.

Were we to dump the "current proposed project" and go with a superior technology, such as the one PERC uses, we might even get a higher yield of reclaimed water and thus enhanced aquifer recharge.

As previously noted, I don't have the expertise to evaluate all of this data, but someone receiving this message either has it, or knows someone who does :-)

What I do feel confident saying is that it looks to me like we are woefully unprepared to legally and responsibly face a worst-case water supply disaster on a sunny day in July, and unless we want to start putting in really big water storage tanks all over town, or keep violating well permit conditions (NOT OK) we had better get moving on water wastewater reclamation plans.

Before I close this message, let me throw out another thought. Suppose the desal plant breaks down at the same time as the State water system goes down - AGAIN, like it did on Labor Day weekend, 2011? If we cleaned up the Morro Basin well nitrate pollution source, the well water could go directly into the water system; would not require processing at the desal plant. As you know, I believe that the nitrate problem in both the Chorro and the Morro wells is sewage - NOT fertilizer from agricultural runoff. I think that the statistics and scenario outlined here clearly show the importance of cleaning up the sewage sources AND having optimal

> Exhibit 6 A-3-MRB-11-001 349 of 363

wastewater reclamation facilities.

Linda

----- Original Message -----Subject:Morro Bay water supply issues - more evidence of the need for wastewater
 reclamation
Date:Tue, 10 Jul 2012 07:28:04 -0700
From:Linda Stedjee linda Stedjee@charter.net
To:undisclosed-recipients:;

Hi,

I was recently asked whether I believe that the City of Morro Bay can serve the needs of its water customers without violating the terms of its Chorro Valley municipal well permits - something that is much more than just a legal issue. To support analysis to determine whether that is possible, I gathered, organized and analyzed some data. I do not have the answer, but believe that the following information will be useful to those with the right expertise. I believe it is critical that we determine our true position and vulnerabilities in regard to our water supply, and take action to ensure that the City can always provide water to its customers responsibly - that is, without negatively impacting the environment and other users of the aquifers. State water is going to be less and less reliable, despite unsupported claims made by City staff, and we need to ensure a sustainable supply.

Worst Case Scenario

I believe it is clear that, to meet demand without violating permit restrictions, the City must be able to provide sufficient water for its customers when three critical conditions occur simultaneously:

- <!--[if !supportLists]--><!--[endif]-->1. It is July, historically the month with highest water usage. Over last five years, usage has consistently been highest in July, ranging from 49,491,000 gallons in July, 2009 to 41,216,000 gallons in July, 2011. Daily usage on average ranged from 1,596,483.9 to 1,329548.4
- <!--[if !supportLists]--><!--[endif]-->2. Chorro Creek is dry or has minimal surface flow and the Chorro Valley wells cannot be legally used. In general, in mid-and late-summer, the Chorro Basin wells cannot be used because surface creek flow is under 1.4 cfs the minimum flow specified in permit conditions.
- <!--[if !supportLists]--><!--[endif]-->3. State Water is unavailable due to infrastructure malfunction or severe cutbacks

This is, I believe, a "worst case scenario" in terms of the City's ability to deliver sufficient water to meet demand. I believe that, if the City cannot meet demand when these three conditions occur simultaneously, it will have no recourse but to violate Chorro Valley well permit conditions and thus harm the environment and other aquifer users. On Labor Day weekend, 2011, things were even worse - a City desalination plant equipment failure coincidentally occurred at the same time as a major State Water Project infrastructure failure. However, a comprehensive, well-executed maintenance and testing plan, should enable the City to avoid major disruptions in future desalination plant operations, so plant equipment failure was not included in the set of conditions above.

Are Alternative Sources Sufficient to Meet Demand?

I believe that the key questions generated regarding this scenario are:

- <!--[if !supportLists]--><!--[endif]-->1. Can the City produce 1,596,483.9 gallons of water per day by processing Morro Basin well water and seawater through the desalination plant?
- <!--[if !supportLists]--><!--[endif]-->2. For how long can the City's desal plant produce adequate water supplies without draining the Morro Basin aquifer and/or exceeding its annual diversion limit for that aquifer?

The "recovery rate" for the BWRO trains used to treat well water is 75%. I believe that the two BWRO trains each can produce 450 gpm, and the SWRO facility can produce about 400 gpm, but this must be verified.

There are 1440 minutes in a day, so if the total capacity turns out to be 1300 gpm, then the total amount that the desal plant could turn out in one day would be $1440 \times 1300 = 1,872,000$. That is clearly more than 1,596,483.9.

However, I would assume that the operation must be shut down for maintenance on a regular basis, reducing the actual daily production. In addition, like the Chorro Basin aquifer, the Morro Basin aquifer is likely to have limited water available in July. The impact of these factors is unknown to me.

It should also be noted that there are some potential issues regarding the desal plant's disposal of brine waste. Currently, the plant uses the power plant outfall, and is "piggybacked" into the power plant's permit. If the power plant goes away, where will the desal brine waste be disposed of? Could they use the WWTP outall? Maybe, but if the WWTP is moved, that outfall will most likely be decommissioned unless a new permit could be obtained.

I believe that use of the desal plant to treat Morro Basin well water could potentially be eliminated if the nitrate problem were eliminated. I, along with a number of others, believe that the nitrates are very clearly from sewage leaking from the Main Street trunk line, and NOT from agriculture, as has been claimed. You can see a presentation of the evidence here: http://www.rockofthecoast.com/2012/02/13/rock-research-leaking-sewage-not-agriculture-may-be-source-of-nitrate-problem-in-morro-bay-city-wells/ With the nitrate problem solved, the Morro Basin well water could go directly into the City water system - saving both money and water (the desal plant process for the well water has only a 75% recovery rate; the remainder of the water going into the system becomes part of the waste that is disposed of.)

What Impact Would Wastewater Reclamation Have?

Now, suppose that we had a successful wastewater reclamation program in place to recharge the Chorro Basin aquifer. Could this keep the Chorro Basin aquifer water levels high enough that the surface flow in Chorro Creek would be sufficient to allow use of the Chorro Basin wells

> Exhibit 6 A-3-MRB-11-001 351 of 363

within permit limits, even during the dry summer and early fall months?

I do not have the expertise to perform the analysis necessary to answer this question. However, I do know that precipitation is the primary form of recharge for the Chorro Basin aquifer, and the degree to which that source could be supplemented with reclaimed wastewater could potentially be very significant, and extend the period during which significant amounts of water could be produced by the Chorro Valley wells without violation of permit conditions.

Background Information/Data

Groundwater Annual Diversion Limits, per Urban Water Management Plan

Morro Basin: 581 acre feet - 189,319,680 gallons Chorro Basin: 1,143 acre feet - 372,448,183 gallons

Total: 561,118,663.6 gallons

Additional Diversion Limits

Chorro Basin: Diversions must cease when when downstream surface flow is under 1.4 cfs and/or when diversions are causing negative impacts to specific users, as defined in SWRCB decision 1633

Chorro Basin Well shutdown

Chorro Basin Ashurst wells are currently shut down per order by the CDPH. Regardless of whether reclamation is in place, they cannot be used until the CDPH is satisfied that its conditions have been met.

5 Years of Actual Annual Water Usage, from Morro Bay Water Production Reports

Notes: 1. R/O refers to water processed in desal plant – source is Morro Basin wells and/or seawater

2. Amounts are in gallons

2011

Morro Basin	180,000
Chorro Basin	4,592000
R/O	27,339,200
State Water	372,679,000
Total:	404,790,200

Month of highest usage: July, 41,216,000

2010

 Morro Basin
 15,807,300

 Chorro Basin
 23,984,000

R/O	84,084,000
State Water	284,456,000
Total:	408,331,300

Month of highest usage: July, 42,715,000

2009

Morro Basin	3,601,000
Chorro Basin	80,575,000
R/O	21,666,000
State Water	348,309,000
Total:	454,151,000

Month of highest usage: July, 49,491,000

2008 totals

Morro Basin	0
Chorro Basin	58,229,000
R/O	9,105,600
State Water	382,459,000
Total:	449,793,600

Month of highest usage: July, 47,143,000

2007 totals

Morro Basin	42.100
Chorro Basin	90,065,000
R/O	6,208,000
State Water	363,582,000
Total:	459,897,100

Month of highest usage: July, 47,526,000

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 353 of 363

RECEIVED

Greetings,

CALIFORNIA ASTAL COMMISSION

JUL 1 1 2012

I am appellant in the City of Morro Bay/Cayucos CSD (MBCSD) application to build a new WWTP at the site of the existing plant in Morro Bay. I will be unable to attend any of the meetings and present my views in person; however I hope the following comments can be entered into the official record. I have attached them separately and also repeated them hereafter. They are as follows:

A recent report by the MBCSD noted that the CCC was happy with how the MBCSD dealt with the substantial issues regarding the location of their treatment plant that were raised in the Jan. 2011 staff report by the CCC. Perhaps MBCSD misspoke or you read different reports than I did. I think that the studies done by Dudek for the MBCSD were suspect beginning with the rough screening of alternatives. Were you not curious why during the rough screening that the second highest ranked of the seventeen sites studied was discarded from further analysis? The MBCSD established the ranking criteria but they applied a specific cost factor only to this site. This action was not documented by any type of analysis or data presented in the "rough screening analysis. Perhaps it was because this site might be deemed superior by the CCC to their preferred site.

This site is the existing WWTP site at the California Men's Colony (CMC). Some of the positive aspects that this site exhibits vis-à-vis the existing WWTP site and other sites are:

- It provides a better alternative for waste water reuse since there is far more agriculture development nearby, there is a nearby a golf course that is short of water in the summer and there are plans to expand the SLO Botanical garden by 157 acres for which they would like to use reclaimed water.
- It would probably increase the water supply for the city of Morro Bay by allowing the city to pump more water from its Chorro basin wells if it maintained a minimum flow of 1.4 cfs. in Chorro Creek.
- Flow augmentation to Chorro Creek during the winter/spring would probably provide greater protection for migration of the endangered southern Steelhead.
- It might actually cost less to construct and operate a WWTP at this site in spite of the increased conveyance cost due to the fact that
 - There is already a treatment plant on the site. Some facilities such as labs, maintenance and operations buildings might not be necessary.
 - Some processes could be designed for lower loadings due to reduction in peaks due to averaging.
 - Fewer operators would be required. \geq
- It would not have concerns regarding 100 year floods, tsunami's, liguefaction, 0 etc.
- Delays would not be excessive since 0
 - Recent EIR's have been performed,
 - Iand acquisition and easements would be straight forward.
 - The existing plant uses a treatment scheme almost identical to that proposed.

Exhibit 6 A-3-MRB-11-001 354 of 363

- The discharge requirements would most likely be very similar to those for the existing WWTP.
- o Cultural and environmental impacts appear to be minor.
- No view sheds would be damaged and no present or future coastal uses would be impaired.
- Ground water replenishment would be more possible at this site than any other since the site is higher up in the basin.

The tone of *fine screening* analysis by MBCSD was rather biased but their arguments for the existing WWTP site seem compelling. However, recall that the prime competitor had been eliminated by "executive fiat". The two alternative sites presented for analysis in addition to the site of the existing WWTP offered some positive aspects but in my mind:

- They did not do enough for waste water reuse due to a lack of demand for the recycled water;
- They were poorly located for stream flow augmentation and ground water recharge.
- o They were high cost.
- o They had prime ag lands issues.

As noted previously, the CMC site most likely does not exhibit these characteristics.

The recycled water study by the MBCSD seemed to be comprehensive and accurate for the sites studied but requirements for treatment by reverse osmosis were probably exaggerated. Different conclusions may well have been reached if a site located in the upper portion of the Chorro basin had been included.

It is with great sincerity that I request the CCC direct the MBCSD to objectively evaluate the CMC site as an alternative to the site of the existing treatment plant using all of the criteria and guidelines outlined in the Jan., 2011 staff report.

Thanks for your time and consideration,

aley D. Beattie

Alex Beattie Morro Bay, Ca <u>Oldfishdog@gmail.com;</u> (805) 772-5694

Comments on Site Selection for MBCSD Waste Water Treatment Plant

A recent report by the MBCSD noted that the CCC was happy with how the MBCSD dealt with the substantial issues regarding the location of their treatment plant that were raised in the Jan. 2011 staff report by the CCC. Perhaps MBCSD misspoke or you read different reports than I did. I think that the studies done by Dudek for the MBCSD were suspect beginning with the *rough screening* of alternatives. Were you not curious why during the rough screening that the second highest ranked of the seventeen sites studied was discarded from further analysis? The MBCSD established the ranking criteria but they applied a specific cost factor only to this site. This action was not documented by any type of analysis or data presented in the "rough screening analysis. Perhaps it was because this site might be deemed superior by the CCC to their preferred site.

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- Flow augmentation to Chorro Creek during the winter/spring would probably provide greater protection for migration of the endangered southern Steelhead.
- It might actually cost less to construct and operate a WWTP at this site in spite of the increased conveyance cost due to the fact that
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 - Some processes could be designed for lower loadings due to reduction in peaks due to averaging.
 - Fewer operators would be required.
- It would not have concerns regarding 100 year floods, tsunami's, liquefaction, etc.
- Delays would not be excessive since
 - Recent EIR's have been performed,
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 - The existing plant uses a treatment scheme almost identical to that proposed.
 - The discharge requirements would most likely be very similar to those for the existing WWTP.
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- No view sheds would be damaged and no present or future coastal uses would be impaired.

 Ground water replenishment would be more possible at this site than any other since the site is higher up in the basin.

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With great sincerity I request that the CCC direct the MBCSD to objectively evaluate the CMC site as an alternative to the site of the existing treatment plant using all of the criteria and guidelines outlined in the Jan., 2011 staff report.

Sincerely,

aley D. Beatto

Alex D. Beattie Morro Bay, Ca RCE 19859 (retired)

Exhibit 6 A-3-MRB-11-001 357 of 363

Rexing, Stephanie@Coastal

From: Linda Stedjee [Istedjee@charter.net]

Sent: Friday, July 13, 2012 8:46 AM

Subject: More on the importance of reclaiming/recycling Morro Bay wastewater

Hi,

I would like to provide a little more information on the status of the Morro Bay water supply and the importance of wastewater recycling. Some of the information here is in article I have referenced in earlier emails, but perhaps not everyone clicked on the link and read the article.

In September, 2011, Neil Farrell reported in the Bay News that Morro Bay nearly ran out of water on Labor Day weekend that year. In his article, Farrell discussed an unexpected State Water Project outage, and stated,

"Meanwhile, in an eerily similar set of occurrences, Morro Bay officials averted a potential local water shortage, after part of its backup water system proved unprepared. Combined, they could have made for a water shortage in the middle of Labor Day Weekend." The backup water system problem Neil referenced is the desal plant.

The specific portion of the article I want to emphasize is Dylan Wade's reference to the City's "Plan C" for dealing with water outages. It evidently involves use of the Chorro Valley wells. All but one are supposed to be in "inactive" status. Beyond that, in September, use of any of the Chorro Valley wells would violate SWRCB Decision 1633, which indicates that the wells cannot be used when the downstream surface flow in the creek is under 1.4 cfs At that time of year, the creek is dry.

Neil quotes City of Morro Bay staff member Dylan Wade: "Had state water not come back online when it did, the city would have been forced to turn to Plan C."

and,

"By Monday, we would have added the Chorro water," said Wade. Chorro water is high in nitrates and problematic because it isn't treated and must be blended with treated water to reduce the overall nitrate levels. Doing that would have triggered the City's water emergency notification plan, which Wade said would have included a warning to residents that they were using the groundwater wells and to be careful of the nitrates, which are potentially harmful to babies, pregnant women and folks on dialysis."

I believe that Neil's story clearly points out the need for a serious wastewater reclamation program. This is not just an environmental issue and a legal issue, but a human health issue as well

A recently-drafted hydrology report on the Chorro Basin (done by Fugro Consultants, Inc.) claims that nitrates are currently low (I do not believe that, but that is what the test results say). It also notes that historically, the nitrates have gone up and down unexpectedly, with significant periods when they were over the 45mcl limit. The report offers some speculation as to why the nitrates might currently be lower, but it is only speculation. Here the pertinent text from the study:

Chemical hydrographs for City Well Nos. 9, 9A, 10, 10A, and 16 indicate nitrate ion concentrations (expressed as NO3 or nitrate in milligrams per liter) for many of the wells have periodically exceeded the 45 mg/l maximum contaminant level established by the

Exhibit 6 A-3-MRB-11-001 358 of 363

California Department of Public Health (DPH). The exceedances, while variable temporally, are most noticeable during the period from about 1985 to about 1995. With the significant reduction in pumpage by the City from their wells in the Ashurst area commencing about 1998, the frequency of sampling for nitrate ion concentrations has been reduced. Nitrate concentrations have also dropped significantly, typically falling to within a range of from 15 to 20 mg/l until about 2008, and thereafter nitrate concentrations have again spiked up significantly, in many cases exceeding the DPH 45 mg/l upper limit. Since 2010 (i.e., after completion of the CHG 2009 report) nitrate concentrations in the City wells have ranged from about 10 to 15 mg/l. The reason for the lower concentrations is unknown, but is possibly related to rainfall/ streamflow recharge, which can temporarily flush nitrate species held in the soil zone, changes in land use patterns and nitrate loading associated with irrigated agriculture, and/or improved nitrate removal processes associated with wastewater discharged from the California Men's Colony WWTP located upstream.

Based on history presented, I think it is clear that the nitrate levels could spike again at any time. Dilution is a primary method of dealing with high nitrate concentrations; hence recharging of the aquifer should be helpful not only in protecting the environment, but in protecting human health

Linda

Exhibit 6 A-3-MRB-11-001 359 of 363

Rexing, Stephanie@Coastal

From: Linda Stedjee [Istedjee@charter.net]

Sent: Thursday, July 19, 2012 7:30 AM

To: Cavalieri, Madeline@Coastal; Carl, Dan@Coastal; Rexing, Stephanie@Coastal; Craig, Susan@Coastal

Subject: Local news article says Livick calls CCC staff "good poker players", implies deception Hi,

I thought you might be interested in a Bay News article that just came out: http://www.tolosapress.com/managed_files/cms/BNWebIssue071912.pdf

In it, is this commentary:

All the studies the JPA did apparently are being ignored, which Livick said was a surprise to them, since the Commission staff had been saying it was happy with the extra analyses that were done. "They're good poker players," he said of the Commission staff's apparent deception. "We had no indication from the line-level staff that there was going to be a recommendation for denial."

Gee, what did they think that the content of the DEIR review meant?

The spin doctoring is apparently going full force - with the effort to blame the CCC for cost overruns:

The potential for denying the CDP leaves the city shaking its heads at what to do should the commissioners vote with the staff recommendation. It would mean basically starting over with a new facility master plan, said Livick. Also, rates in both towns were raised several years ago to cover the expected \$34 million price tag, as well as provide money for other needed repairs. It's unknown how much bills will have to be raised again to cover shucking the current project and starting over from scratch. That would come with a new facilities plan.

While their desperation is clear, their "logic" is muddy. The bottom line for many of us is that these people did a facility master plan before they bothered to do a flood hazard study and a DEIR. They started design without waiting for a CCC approval of the DEIR They ignored CCC staff recommendations made as early as 2008. They insisted on following their ill-advised course in the face of mountains of evidence that it was a really, really bad idea, ignored sound advice, and failed to follow the most basic principles of good project management (I say this as an old project manager from "wayback")

Exhibit 6 A-3-MRB-11-001 360 of 363 Back in January, I wrote an article, "Where did all the Money go".

http://www.rockofthecoast.com/2012/01/06/the-morro-baycayucos-wastewater-treatment-plant-projectwhere-did-all-the-money-go/

It focuses on the incredible waste of taxpayer money that has resulted from the actions of Morro Bay and Cayucos officials and staff. I think it is clear that, they hope to pin the blame on the CCC.

So do we really have to start all over again because of the failings of our local officials and staff? Maybe not. How about a PERC Water plant? Their plants can be built in a couple of years, and I believe that the customized design they did for Morro Bay can be built at any site. However, If you believe this option should be seriously considered, I suggest you might want to delay things until the new Council majority takes office in December. The people in power now are fans of the technologically -outmoded, outrageously-expensive, overpriced sewer plants projects that their "favorite" contractors are known for.

Linda Stedjee

Exhibit 6 A-3-MRB-11-001 361 of 363

Rexing, Stephanie@Coastal

From:Linda Stedjee [Istedjee@charter.net]Sent:Friday, July 20, 2012 7:07 PMSubject:More Morro Bay desal expansion?Hello,

This morning, a friend of mine met with investigative reporters from Santa Cruz. The reporters, who are doing a story on desalination plants, told my friend that they met yesterday with Dylan Wade, and that Wade told them that our Morro Bay desalination plant is going to be expanded again. If that is so, I believe there are obviously major causes for concern. I will list here the ones that come to my mind:

- <!--[if !supportLists]--><!--[endif]-->1. Cost: This is very expensive water
- <!--[if !supportLists]--><!--[endif]-->2. Energy usage: This is an energy-intensive way of producing potable water; thus not good for the environment
- <!--[if !supportLists]--><!--[endif]-->3. Brine waste discharge: We cannot simply discharge more and more brine into the ocean without having an increasingly negative impact.
- <!--[if !supportLists]--><!--[endif]-->4. Cleaning up the sources of pollution of our aquifers (which I believe are primarily sewage) and implementing wastewater reclamation on a large scale would be much more environmentally- and budget-friendly in the long run.

I do not recall hearing about any funds being allocated for further expansion of the plant, and can find nothing about this in the Council meeting agendas for the past year. Perhaps more expansion was approved before that – but perhaps not. Any money earmarked for this could obviously be spent implementing reclamation.

I do believe the plant expansion issue needs to be looked into. If Wade is telling reporters that the plant is going to be expanded again, there can be no doubt that there are plans in place.

As noted above, one major issue is the dumping of brine. Right now, it goes into the power plant outfall, but where will it go when the power plant shuts down? Do City staff think they will keep dumping the brine in the same place? It would no longer be diluted with heated water from the power plant. How would the lack of dilution change the impacts on the environment?

Regarding the impacts of dumping brine from desal operations into the ocean, here is some material from an article I wrote on the failed staff scheme to dump Culligan brine waste in the ocean via the WWTP outfall:

It might be said that there is a precedent for discharging brine into the ocean near the Coast of Morro Bay. The Morro Bay desalination plant discharges its brine into the power plant outfall at the north foot of Morro Rock. However, the WWTP's ocean outfall is a considerable distance offshore, in the open ocean, where environmental conditions and factors are different from those adjacent to the Rock. Another key difference is that the desalination plant brine is mixed with heated discharge water from the power plant, while the CCWT brine would be combined with effluent from the WWTP. In addition, the desalination plant was built under a Coastal Development Permit issued in 1993 to allow the City of Morro Bay address an emergency situation, and some have

> Exhibit 6 A-3-MRB-11-001 362 of 363

questioned whether the same permit would be accepted by the CCC today.

Clean water activist Sadowski asserts that, "Each outfall has its own unique effects on the surrounding marine environment that need to be investigated for the effects of brine discharge. Comparing brine discharges in South County, Monterey or Hollister to the potential effects on Estero Bay's marine environment is absurd." Sadowski's opinion appears to be supported by those of a number of researchers.

A 2007 study on desalination plant brine discharge, "Evaluating Environmental Impacts of Desalination in California", by H. Alpert, C. Borrowman and B. Haddad, deals with desalination plant brine, but may be applicable to CCWT brine as well. The authors state, "Ocean discharge is viable but requires a significant amount of research to prove environmentally sound. Studies of hydrodynamic modeling, toxicity testing, salinity tolerance analysis, and intake water quality characterization must be completed before approving an open ocean discharge." And, "Every site has a limited carrying capacity with respect to assimilating brine and thermal waste."

A University of Texas study, "Fate of Desalination Brine in Texas Coastal Bays and Estuaries" states, "Disposal of brine into coastal waters is an economical option for the desalination projects. After discharge, dense brine water flows below the less-dense ambient water to form a stratified cap over the bottom sediment. Typically, it is not the quantity of salt discharged that causes a problem; it is the mixing rate and the brine's fate prior to complete mixing that determines impacts. If natural forces of plume flow, wind mixing and tidal currents are slow to mix the brine with the overlying water, bio-geochemical processes in the sediment may deplete the available dissolved oxygen near the bottom, causing hypoxic (low oxygen) conditions that harm aquatic life. Some Texas bays already experience episodic hypoxia when high evaporation rates combine with weak winds to produce stratified conditions, which could be exacerbated by poorly-sited brine discharges. Finding the optimum discharge location requires a tool for computing the fate of brine with varying winds and currents."

I think it is clear that desalination, while a useful backup, should not be considered the primary source of potable water for the City.

Linda

Exhibit 6 A-3-MRB-11-001 363 of 363