

City of Morro Bay Cayucos Sanitary District

**WASTEWATER TREATMENT PLANT
UPGRADE PROJECT
APPEAL NO. A-3-MRB-11-001**

**Briefing Booklet
CCC Hearing 8/9/12
Item Th17a**

A copy of this briefing booklet has been provided to Central Coast District Staff.

Project Description

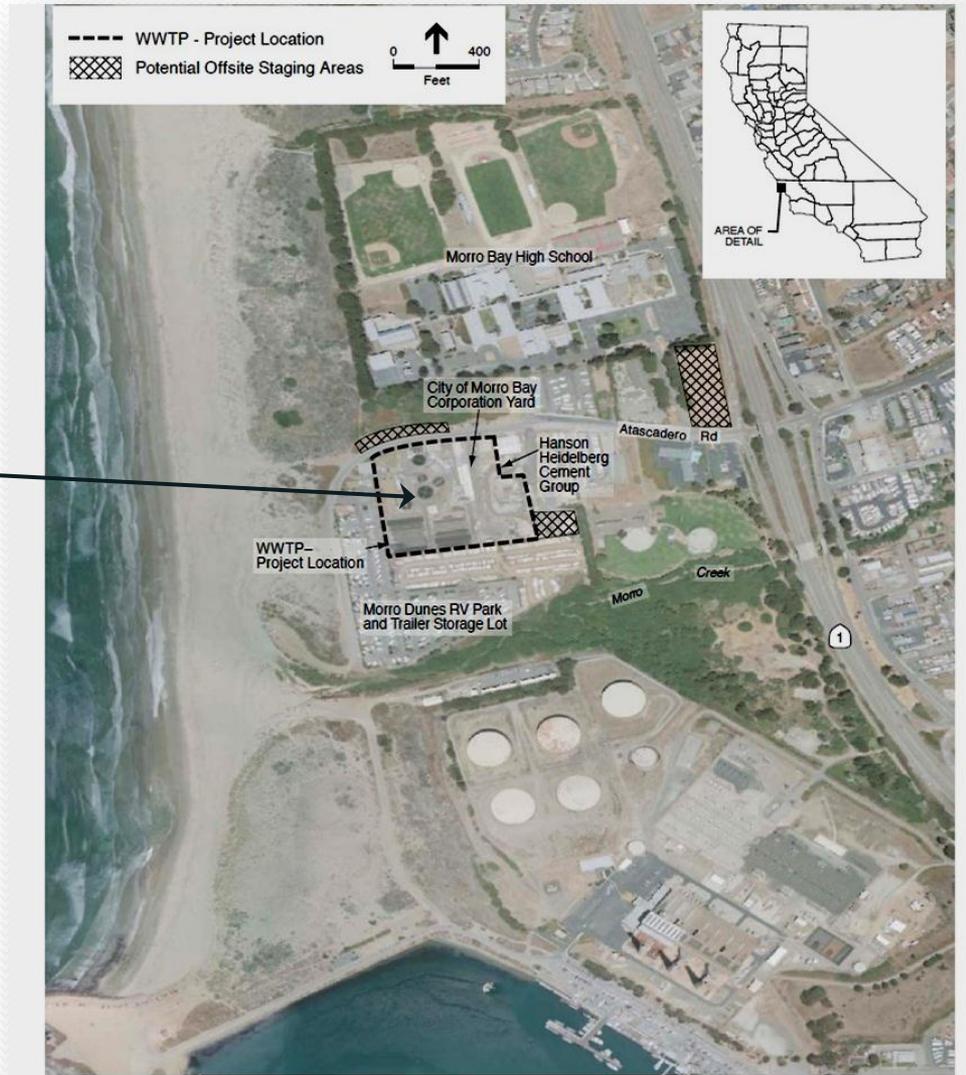
City of Morro Bay and Cayucos Sanitary District (MBCSD) propose to upgrade/reconstruct wastewater treatment plant (WWTP) on existing site to provide full secondary treatment and provide tertiary filtration capacity of 1.5 mgd.

- Per 2008 Settlement Agreement w/RWQCB, plant required to meet full secondary requirements and be completely operational and in full compliance with state and federal permits by March 31, 2014.
- Morro Bay and Cayucos have voluntarily chosen to surpass the requirements for full secondary treatment by also including tertiary filtration into the treatment process in order to facilitate future reclamation.

Project Description (cont.)

- Wastewater will be highly treated using oxidation ditch biological process with filtration, surpassing requirements of EPA and State Water Resources Control Board.
- Tertiary filtered effluent to meet standards for disinfected secondary recycled water and would be available for reclamation.
- Immediate reuse of recycled water includes on-site irrigation and truck fill station. Project also includes plans to expand recycled water use efforts.
- Proposed project downsizes WWTP; accommodates full build-out of Morro Bay & Cayucos, but does not induce growth.

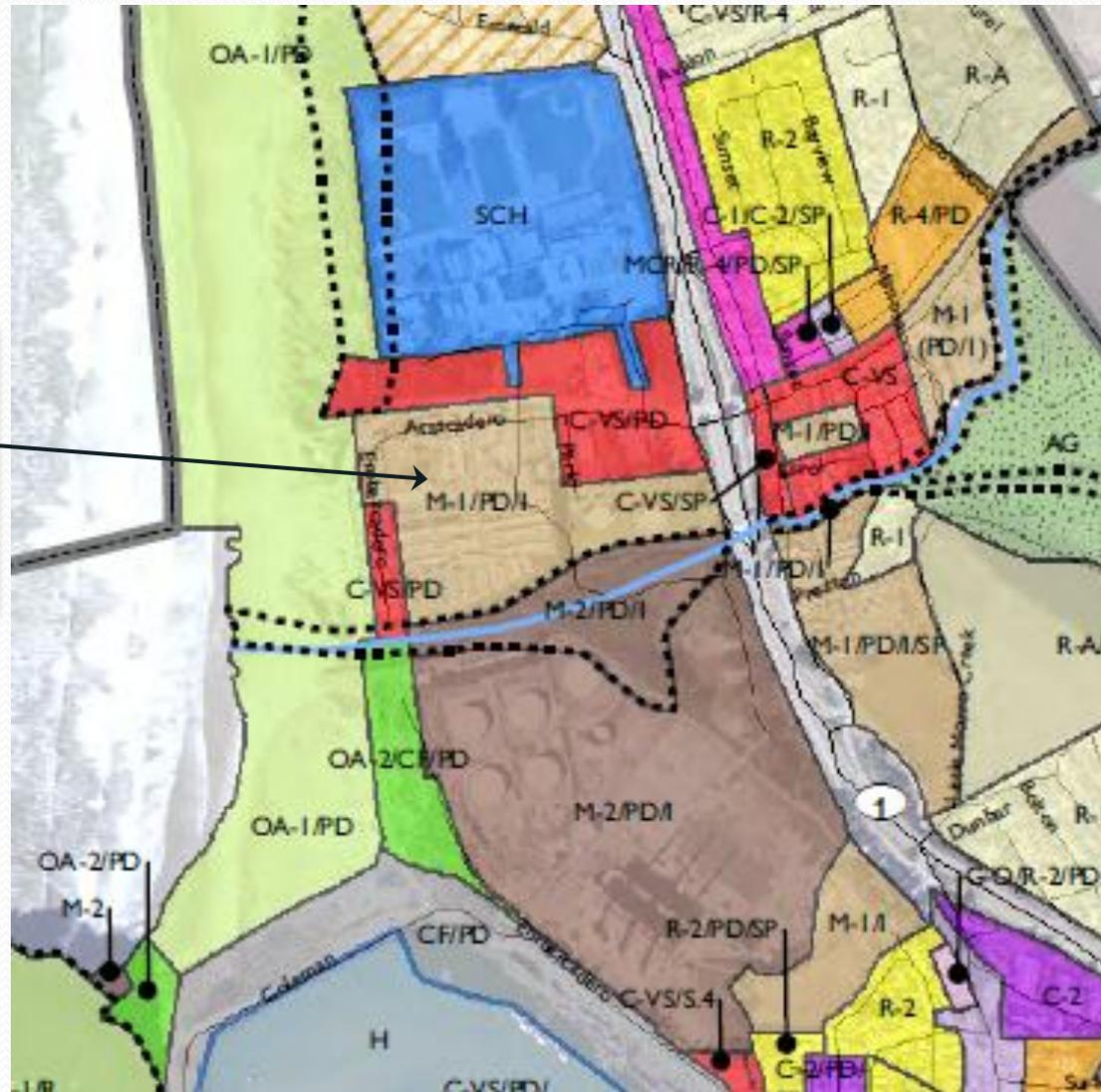
Project Location



Existing
WWTP
Approx. 1/4 mile
from shoreline

Project Location

Zoning
Designation
M-1/PD/I
Coastal Dependent
Industrial
Planned Development



Project Purpose and Objectives

- Improve ocean water quality above and beyond requirements, consistent with Consistency Certification CC-007-06 and Settlement Agreement w/RWQCB
- Eliminate Clean Water Act 301(h) waiver
- Comply with LCP regulations and Coastal Act Public Access/Recreation Policies
- Implement phased water recycling program
- Select best environmental alternative
- Select most cost-effective alternative

Project Timeline (2007-present)

- **May 2007**– MBCSD Approves Upgrade of Wastewater Treatment Plant to Achieve Tertiary Treatment Standards
- **December 2008** – Regional Water Quality Control Board and MBCSD Settlement Agreement for Plant Upgrade by March 31, 2014
- **January 2009** – CCC Federal Consistency certification for reissuance of 301(h) NPDES modified discharge permits for the WWTP and ocean outfall
- **January 11, 2011** – Final EIR Adopted and Coastal Development Permit Approved by Morro Bay City Council
- **January 18 - 31, 2011** – Coastal Commission Appeals Filed
- **March 11, 2011 – CCC Hearing & Finding of Substantial Issue**
- **June 27 & 28, 2011** – Public Workshops to Review/ Comment on Work Plan, Identify Potential Alternative Sites, and Discuss Proposed Criteria for Draft Rough Screening Alternative Site Analysis
- **August 25, 2011** – Meeting with CCC Staff to Discuss Work Plan, Alternative Sites Identified, and Fatal Flaw Analysis Preliminary Results
- **September 1, 2011** – Draft Rough Screening Alternative Site Evaluation Released for Public Review
- **September 9, 2011** – JPA Hearing on Draft Rough Screening Alternative Site Evaluation
- **September 19, 2011** – Public Workshop to Review/ Comment on Draft Rough Screening Alternative Site Evaluation and Proposed Criteria for Fine Screening Analysis
- **November 11, 2011** – JPA Hearing on Fine Screening Alternative Site Evaluation
- **December 9, 2011** – Meeting with CCC Staff to Discuss Results of Fine Screening Alternative Site Evaluation and Next Steps
- **Jan.-June 2012** – Coordination w/CCC staff and Preparation of Addendum to Flood Study, Tsunami Flood Study, Highest and Best Use Analysis, Visual Simulation, and Recycled Water Feasibility Study
- **March 2012** – Release of public draft 2012 Recycled Water Feasibility Study
- **June 2012** – Further coordination w/CCC staff re: Historic Dune System and Wave Uprush/Tsunami Hazard Studies
- **August 9, 2012**–CCC De Novo Hearing

Current WWTP Site



100-Year Flood Zones

- **A** Areas subject to a one percent or greater annual chance of flooding in any given year. Because no detailed hydraulic analyses have been performed on these areas, no base flood elevations are shown.
- **AE** Areas subject to a one percent or greater annual chance of flooding in any given year. Base flood elevations are shown as derived from detailed hydraulic analyses.
- **AO** Areas subject to a one percent or greater annual chance of flooding in any given year. Flooding is usually in the form of sheet flow with average depths between one and three feet. Average flood depths are shown as derived from detailed hydraulic analyses.

- **Soil Type Boundary**
Slope = Less than 10% on site

- Parcel Boundary**
- Project Boundary**
- **Existing Gravity Sewers**
- - - **Existing Outfall**
- Conceptual Site Design**
- **Proposed Influent Foremain**

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FIGURE 2
SITE 1 - Current WWTP Site Constraints and Conceptual Site Plan

MORRO BAY-CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT UPGRADE

Alternative Sites Evaluation



Current WWTP Alternative

- After extensive analysis, Current WWTP site was determined to be ***preferred alternative***
- Site Recommendation:

“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.”

Alternative Sites Evaluation,
Phase 2--Fine Screening Analysis, Page ES5

Righetti Alternative

- Pursuing Righetti Alternative results in significant delay and substantially increases costs:
 - Minimum 10 years estimated to complete project
 - Additional cost of approx. \$28m (acquisition, pipelines, pumping all wastewater uphill, etc.)
- Righetti site privately owned, outside City limits & Sphere of Influence, would require annexation to District, approval of SLO Co. & LAFCO, and LCPA prior to project design and permitting
- Righetti site renders Phase 1 recycled water project less economically feasible by moving plant further away from most likely users identified in Recycled Water Study
- Not environmentally preferred alternative

City LCP and Coastal Act Consistency Analysis

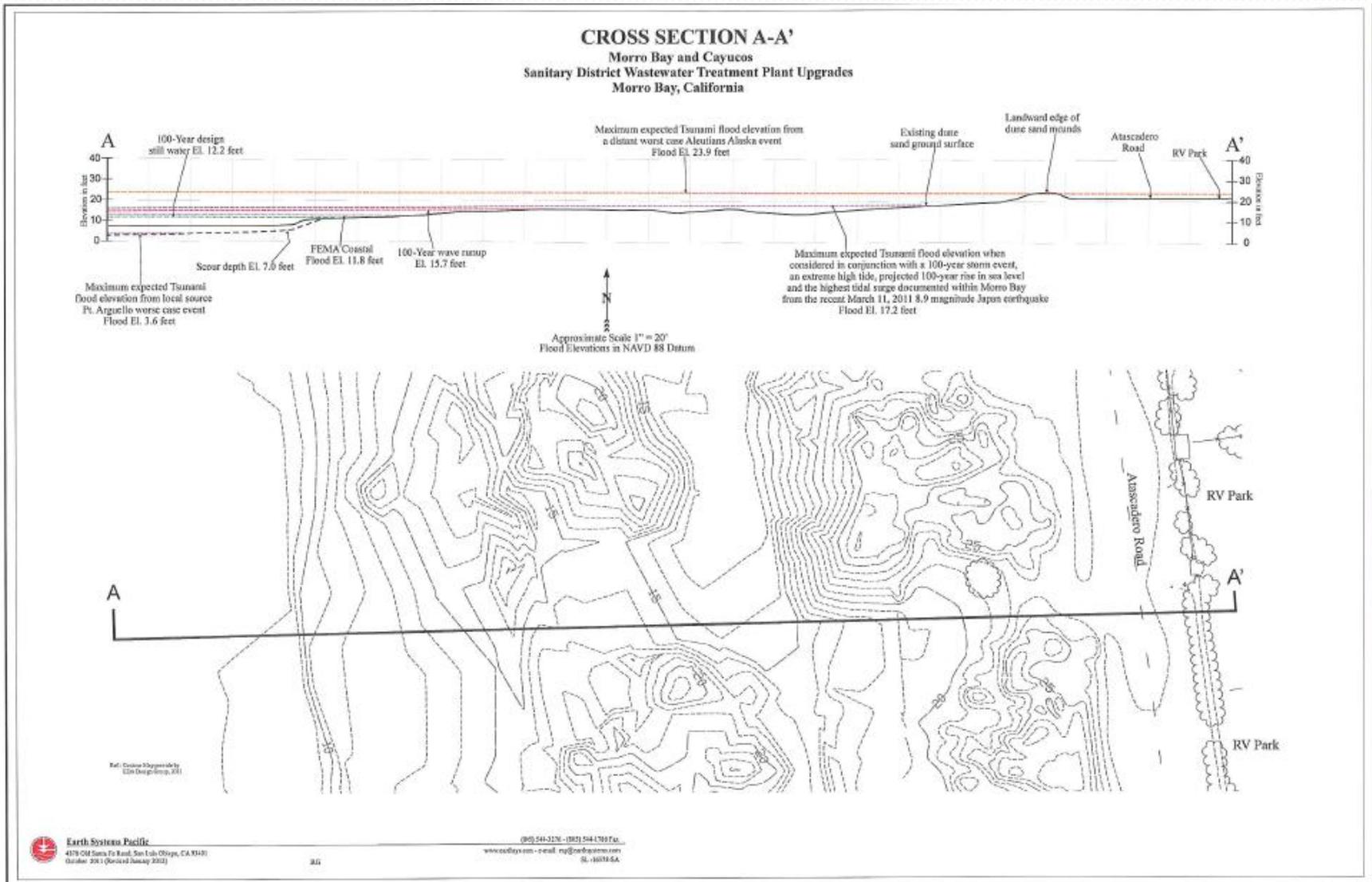
- Project at Current WWTP site can be found consistent with City's LCP and Coastal Act policies related to:
 - ***Coastal Hazards***
 - ***Public Access and Recreation***
 - ***Visual Resources***
 - ***Archaeological Resources***
 - ***Sustainability/Water Reclamation***

- Project design and proposed Special Conditions resolve all staff concerns

Coastal Hazards (Tsunami, Wave Uprush, Flooding)

- ***Minimize risks to life and property; ensure structural stability; limit grading to extent feasible.***
- Low tsunami potential at Current WWTP site
- In 100-year floodplain, project reduces facility footprint by 50% and includes mitigation measures to reduce risk, such as elevating concrete structures & electrical components, and utilizing tie down connections in accordance with professional engineering practice
- Additional analyses carried out in response to request by CCC staff clearly demonstrate 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) and existing dune system located south of site is historically stable

Tsunami Flood Elevation



Public Access and Recreation

- ***Maximize public access; protect oceanfront land for public access***
 - No impacts to existing public access in surrounding area
 - Existing and proposed treatment plant consistent with LCP land use designation and surrounding land uses
 - Project reduces size of existing plant and allows for increase in Open Space/Low Impact Visitor-Serving uses on remaining acreage
 - No adverse traffic impacts

Public Access and Recreation Opportunities



0 50 100 200 300 400 500 Feet

- | | | |
|-------------------------|-----------------------------|---|
| Parcel Boundary | Project Boundary | Dune Restoration Area |
| Existing Gravity Sewers | Conceptual Site Design | Proposed Open Space Low-Impact Visitor Serving Use Area |
| Existing Outfall | Proposed Influent Forcemain | Public Access/Open Space |

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EXHIBIT 1
Proposed Open Space Low-Impact Visitor Serving Use Area
 MORRO BAY-CAYUCOS SANITARY DISTRICT WASTEWATER TREATMENT PLANT UPGRADE

Visual Resources

- ***Protect scenic and visual qualities; site development to protect views from public vantage points and along the ocean***
 - Current WTPP facility minimally visible from Highway 1 and beach area; minimal public view blockage toward ocean
 - Project reduces size of existing plant and proposed Open Space/Low Impact Visitor-Serving Use Area creates new visual open spaces on site along frontage roads and as viewed from Highway 1.
 - Compatible with surrounding development
 - Mitigation and design measures to be incorporated to further reduce visibility, such as lighting, landscaping, and architectural enhancements

Visual Resources



Existing



Proposed

SOURCE: MWH, 2010

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure 3.1-2
Visual Simulation,
Looking East from the Ocean

Visual Resources



Existing



Proposed

SOURCE: MWH, 2010

Morro Bay Cayucos Wastewater Treatment Plant EIR . 208013

Figure 3.1-4
Visual Simulation,
Looking West from State Route 1

Archaeological Resources

➤ ***Preserve and protect archaeological resources***

- No significant resources identified at Current WWTP site; site fully developed (much of site previously excavated or imported fill)
- Additional site survey was conducted during Fine Screening Evaluation
- MBCSD has performed outreach to local Native American representatives to ensure potential impacts are minimized
- Impacts to cultural resources unlikely; mitigation measures and monitoring program proposed to reduce any potential risk

Sustainability/Water Reclamation

- ***Maintain long-term and sustainable groundwater resources***
 - Comprehensive Recycled Water Study conducted in 1999 concluded that recycled water not economically viable at that time
 - Updated 2012 Recycled Water Feasibility Study considered:
 - Water reclamation initiatives, groundwater basin recharge feasibility, potential irrigation demands, and salt/nutrient loading on stream flow and groundwater basin.
 - Current project includes Recycled Water Management Plan
 - Immediate reuse will include a truck filling station and on-site irrigation with an identified recycling program to include additional users; Integrated Regional Water Management planning grant to be used to more fully develop Phase 1 of study

CCC Past Actions—Wastewater Treatment

- MBCSD requests same consideration as other recent wastewater treatment plant projects recently heard by the CCC:
 - CDPs issued under similar site conditions in Goleta and Crescent City; LCP amendment approved for Samoa Pacific Group, Humboldt County
 - All sites subject to potential hazards and none were recommended for denial
 - Approx. 50 wastewater treatment plant sites located in proximity to the shoreline in California--none known to have been required to be relocated
 - Los Osos project differs greatly from MBCSD project

Los Osos Comparison - Water Supply

- *What are the differences between the MBCSD project and the Los Osos project in terms of water supply?*
- Significant differences in the water supplies for the two communities:
 - **Los Osos** has two aquifers, the lower aquifer which is being over pumped, causing irreversible sea water intrusion, and the upper aquifer which is being polluted with septic tank effluent. Los Osos has no other sources of supply except for these two impacted basins, necessitating reuse of their wastewater to balance basin in and out flows. Their type of reuse and recharge necessitates a higher level of treatment and standard of care.
 - **Morro Bay** implemented a project in the 1990's to import State water. This imported source is used conjunctively with the two groundwater basins. The multiple sources of supply in Morro Bay reduce the impacts to the local resources providing adequate supply for Morro Bay's projected build-out population.

Los Osos Comparison – Wastewater Treatment

- *What are the differences between the MBCSD project and the Los Osos project in terms of wastewater treatment?*
 - Significant differences in the physical circumstances of the two communities:
 - No wastewater collection and treatment system in **Los Osos**.
 - In **Los Osos**, septic tanks are being replaced with a collection system and treatment plant and treated wastewater is being recycled to offset the groundwater issues.
 - Groundwater aquifers in **Morro Bay** do not lend themselves to recharge with recycled water.
 - **Morro Bay** plant was constructed in the 1950's with major renovation in the 1980's, and needs to be rebuilt to continue to provide reliable service.
 - **Morro Bay's** collection system designed so that much of the effluent reaches the plant by gravity, making the system both low on energy usage and more reliable. Proposed MBCSD project designed to replace existing facilities with new ones, keeping the plant operational during construction.

Reasons for Approval

- Proposed project will upgrade Current WWTP to full secondary treatment and provide tertiary filtration capacity of 1.5 mgd
- Project will improve wastewater quality consistent with CCC Federal Consistency Certification approved in 2009 for reissuance of 301(h) NPDES modified discharge permits for Current WWTP and ocean outfall and Settlement Agreement
- Project will include Recycled Water Management Plan and include use of recycled water for on-site uses and irrigation of the proposed open space/park
- Current WWTP site determined to be environmentally preferred of all sites considered and can be found consistent with City LCP and Coastal Act policies

Reasons for Approval (cont.)

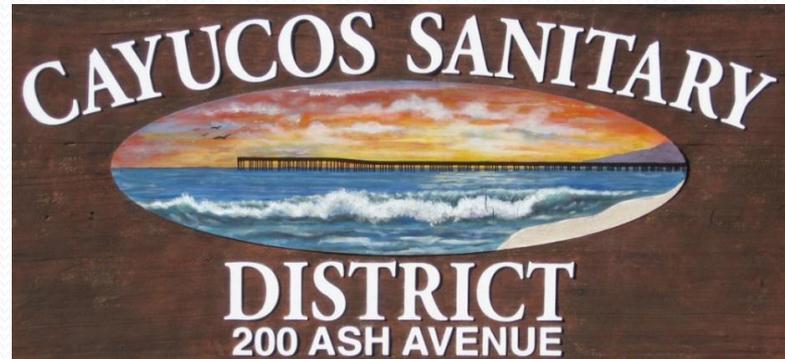
- Section 30250 of the Coastal Act
 - Directs new development toward areas where community services are provided and potential impacts to resources are minimized
 - Requires associated water supplies, wastewater treatment, and/or other forms of supporting infrastructure to be located so as not to cause significant adverse effects, either individually or cumulatively, on coastal resources
 - Locating a plant outside City Limits and SOI does not follow this intent because it extends City services and induces growth/urban sprawl

Reasons for Approval (cont.)

- Section 30412 of the Coastal Act
 - Directs Commission to provide or require reservations of sites for the construction of treatment works and points of discharge within the coastal zone adequate for the protection of coastal resources consistent with the provisions of the Coastal Act
 - City of Morro Bay LCP Policy 5.03 implements this requirement by requiring that ***"The Morro Bay Wastewater Treatment facilities shall be protected in their present location since an important operational element, the outfall line, is coastal-dependent."***
 - Prohibits Commission from taking actions that would be in conflict with State or Regional Water Quality Control Boards

Conclusion

- Applicant requests **approval** of De Novo permit with proposed Special Conditions.



Thank you