



# Morro Bay's **NEW** Water Reclamation Facility (WRF)

Morro Bay City Council Study  
Session  
April 29, 2013



# Agenda

- Welcome and Introductions (5 minutes)
- Discussion of Workshop Goals (30 minutes)
- Presentation and Discussion (60 minutes)
- Measurement of Success (30 minutes)
- Closing Remarks (5 minutes)



# Introductions

- City Council
- Andrea Lueker, City Manager
- Rob Livick, PE/PLS – Public Services Director/City Engineer
- Rick Sauerwein, PE – Engineering Division/Capital Projects Manager
- Bruce Keogh – Water Reclamation Facility Manager
- Robert Schultz – City Attorney



# Meeting Goals

- Major Meeting Goals
  - Review the NEW Water Reclamation Facility Request for Proposal and Discuss the desired outcome.
  - Review the Draft Project Schedule
  - Review the Previous Site Selection Criteria and Potential Sites
  - Review the “Success Factors” from the Previous Project



# Your Meeting Goals

- What do you expect from this study session?

# DRAFT PROJECT SCHEDULE

NEW WRF



# Draft Project Schedule

- Time Estimates base on a Optimistic Parametric Evaluation of Similar Projects
- Major Task Areas
  - Preliminary Activities
    - One Year
  - Facilities Master Planning
    - Two Years
  - Environmental Review and Permitting
    - One and a Half Years
  - Financing
    - Four Years
  - Design and Construction
    - Three Years



# Preliminary Activities

- Determine Goals and Objectives for the NEW WRF
  - Treatment Technology
  - Disposal
  - Reclamation
  - Biosolids
  - Site Analysis
- Selection of Primary Site
- Decision on the Project
- Selection of the “Project Manager”





# Facility Master Planning

- Site Acquisition
- Layout and Sizing of Facilities
- Cost Estimates – Capital and Life Cycle
- Rate Analysis

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# Environmental Review and Permitting

- Location Dependent – City/County
- Environmental Review CEQA/NEPA
  - Initial Study
  - Special Studies
  - Environmental Document
  - Public Review
- Annexation
- Coastal Permitting
- Use Permit



# Financing

- Financing Plan
- Phasing
- Grant Opportunities – Various Agencies Depending on what are the Project Elements
- State Revolving Fund Loans
  - Env Rev and Permitting needs to be complete
- Rates
  - Rate Analysis - in conjunction with Facilities Master Plan
  - Rate Adjustments – Prop 218



# Design and Construction

- Select Design Engineer
- Design Review – 30%
  - Decision on Delivery Method
- Design Bid Build or
- Design Build
- Construction
- Start Up
- Project Completion



# RFP for Preliminary Planning

NEW WRF



# Goal of Preliminary Phase of WRF Project

- Selection of a Project Planning Consultant
- Guide the community through a series of decisions regarding the features and siting of the NEW Water Reclamation Facility (WRF)
- Assist the Council in making Decisions regarding the What, Where and Whys for the Project, before jumping in and working on the details



# Specific Goal Issues

- The Preliminary Planning Process should resolve the following specific issues:
  - Treatment Technology
  - Type of Disposal
  - Ownership and Operation
  - Level of Water Reclamation
  - Disposal Options
  - Biosolids Options
  - Siting Criteria
  - Scheduling





# Treatment Technology

- This Discussion Should Address the Following Areas of the New WRF:
  - Energy Use
  - Water Quality
  - Siting Requirements
- Examples of Types of Treatment Technology
  - Ponds/Lagoons
  - Conventional Activated Sludge
  - Oxidation Ditch
  - Membrane Batch Reactor (MBR)



# Ownership and Operations

- Assist in the decision on the level of Private/Public Partnership Desired
  - Design
  - Design – Bid – Build
  - Design – Build
  - Design – Build – Operate
  - Design - Build – Operate - Finance



# Level of Reclamation

- Look at options and issues for use of the reclaimed water
  - Municipal – Industrial
  - Agricultural
  - Indirect Potable – Groundwater Recharge
  - Direct Potable?
  - Landscape Irrigation
  - Water Quality
- Phased or “Build it and They will Come” Approach



# Disposal Options

- Ocean Outfall – Full or Partial
- Creek Discharge
- Groundwater
- Surface Disposal – Spray Irrigation
- Average Dry Weather ~1.5 MGD
- Peak Wet Weather ~ 8.1 MGD



# Biosolids Options

- Based on Treatment Technology
- Evaluate
  - Composting onsite
  - Hauling to Regional Facility
- Look at Energy needs and Potential Energy Production

# Scheduling

- Provide Updated Schedule that Addresses
  - Siting
  - Permitting
  - Design
  - Construction
  - Start Up

# Site Selection Criteria and Review of Sites

NEW WRF



# Siting Criteria

- Given the other factors, what criteria is important to the community in siting the NEW WRF?
- Review of DRAFT Rough Screening Alternative Sites Evaluation, DUDEK, September 2011 (revised November 2011)





# Site Fatal Flaw Criteria

- From the Previous Project
- Prime Agricultural Land
- Environmentally Sensitive Habitat Areas
- Flood Hazard Zones or Dam Break Inundation Zone



# Fatal Flaw Determination

- Underlying site condition or restriction, such as policy or regulatory prohibitions for new development
- Unmitigable impact to environmentally sensitive resources



# Screening Criteria

- Environmental Considerations
- Local Coastal Program (LCP) Policy
- Logistical and Site Constraints
- Engineering and Economic Constraints



# Environmental/LCP

- Environmentally Sensitive Habitat Areas (ESHA)
- Biological Resources
- Water Quality
- Coastal Priority Land Uses
- Coastal Dependant Development
- Floodplain
- Coastal Hazards
- Public Access and Recreation



# Environmental/LCP

- Public Access
- Recreation
- Visual Resources
- Agriculture
- Cultural Resources
- Sustainable Use of Public Resources
- Land Use Compatibility
- Energy Consumption GHG



# Logistics and Site Constraints

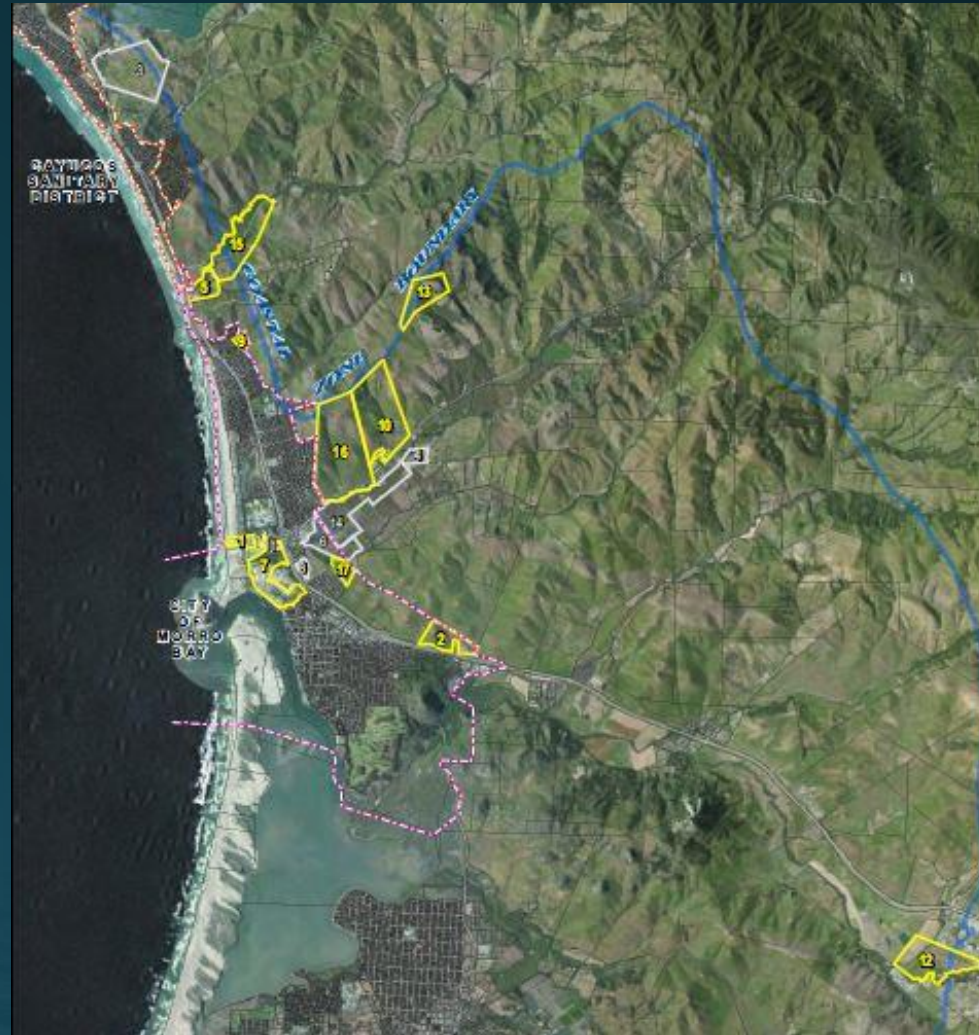
- Land Use Designations – Existing/Changes
- Zoning – Existing/Changes
- Regulatory Restrictions
- Site Availability
- Implementation Time
- Additional Site Requirements
  - Site Clean-up
  - Grading

# Sites Previously Studied

## ~~• Current WWTP Site~~

- Chorro Valley Site
- Whale Rock Site
- Highway 41 /Madonna Property
- Chevron Oil Facility
- Hayashi or Giannini Properties
- Power Plant Site
- PG&E/City Property
- Panorama Street Site
- Rancho Colina Site
- Lila Keiser Park Site
- California Men's Colony (CMC) Wastewater Facility Site
- Power Plant Hillside Tank Farm Site
- Additional Highway 41 Properties (multiple APNs identified)
- 1/2 Mile Up Torro Creek Road (Chevron Facility Hillside Site)
- 1 Mile Up Atascadero Road (Righetti Property)
- APN 068-401-011 (Additional Giannini Property)

# Map of Potential Sites







## Sites Eliminated Due to Fatal Flaws

- Whale Rock Site (#3) – Dam Inundation Zone
- Highway 41 Corridor/Madonna Property (#4) – Creek ESHA
- Hayashi or Giannini Properties (#6) – Floodplain
- PG&E/City Property (#8) – Floodplain
- Lila Keiser Park (#11) – Floodplain
- Additional Highway 41 Properties (#14) – 100% Prime Ag



# Final List of Sites Advanced to Fine Screening

- ~~Current WWTP Site~~

- Chevron Oil Facility (Toro Creek)
- Righetti Property
- Runners Up – Energy Costs and Piping
  - CMC Wastewater Facility
  - Power Plant Hillside Tank Farm
  - Chorro Valley Site
  - Chevron Oil Facility

# Factors for Success

NEW WRF



# Factors for Success

- City Council Unanimously Adopted May 10, 2010
- Affordability/Cost
- Neighborhood Friendly
- Environmentally Sensitive and Restorative
- Water Reclamation/Distribution Compatibility
- Minimized Biosolids Handling Requirements
- Design addresses Flood Plain, Earthquake, Tsunami and Sea Level Rise Issues
- Design and site location addresses anticipated build out needs of both Communities
- Design and Process considers and satisfies conditions of the Coastal Commission

# Closing Remarks and the Future

NEW WRF



# Future Activities

- What would you like to see in Future Study Sessions?
  
- Selection of the Preliminary Phase Consultant Team – May 14, 2013