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CITY OF MORRO BAY WATER FACILITY RECLAMATION PROJECT

PROJECT GOALS

5-YEAR DEADLINE OPERATIONAL WITHIN FIVE YEARS

In June 2016, the City Council selected a preferred site and began the 5-year deadline clock. We are on track to complete the project in June 2021. Our permit to discharge treated water from our existing WWTP will likely expire in 2021, so keeping the project moving forward is important.

NEIGHBORHOOD COMPATIBILITY COMPATIBILITY WITH NEIGHBORING USES

This critical goal requires that the Morro Bay WRF be compatible with its neighbors. The WRF will be engineered for low visibility and aggressive odor and noise control. Also, WRF buildings will be designed, perhaps in a ranch theme, to fit the surrounding character.

COST EFFECTIVE REUSE PRODUCE RECLAIMED WASTEWATER IN A COST EFFECTIVE MANNER

This is actually two goals in one. The first is to control costs to keep our water and sewer rates as low as possible. The second is to reclaim the nearly million gallons of water a day the facility will produce and reuse it to make our city water supply sustainable.

EMERGING CONTAMINANTS TREAT FOR CONTAMINANTS OF EMERGING CONCERN IN THE FUTURE

This goal is to design and build a WRF that is positioned to remove contaminants that have previously not been a concern in wastewater treatment. For example, many new pharmaceuticals are not removed in traditional wastewater treatment processes, may contaminate our groundwater, and may be regulated in the future.

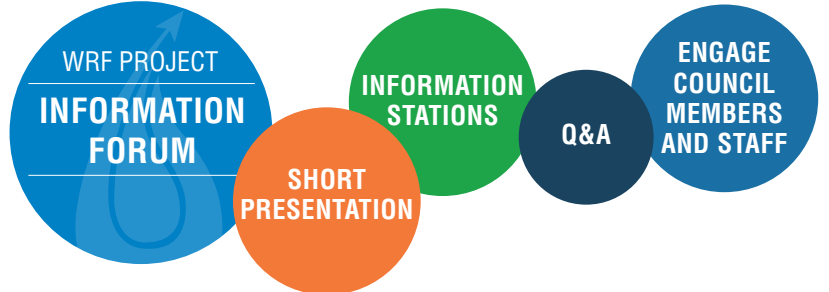
Plan to attend one of the information forums scheduled for June 4th and 5th to learn more.

See inside to learn more...



GET INVOLVED INFORMATION FORUM IMPROVE. ENHANCE. RECLAIM.

Sunday, June 4th
4:30 pm-6:30 pm
- or -
Monday, June 5th
6:30 pm-8:30 pm
Veterans Memorial Hall
209 Surf St, Morro Bay



Come join us at one of the Information Forums – Learn about the Water Reclamation Facility Project, ask questions, and give comments.

WRF PROJECT 2017 SPRING UPDATE

A MESSAGE FROM YOUR CITY

Our City has been working for over 10 years to replace our aging Waste Water Treatment Plant (WWTP).

We have made significant progress in the past 12 months and are approximately four years away from completing an advanced Water Reclamation Facility (WRF). The City Council is actively considering the benefits and burdens of recycling and reusing all of the facility's reclaimed water to allow us to reach water independence.

Last June the City identified the South Bay Boulevard (SBB) site as our preferred site for the new WRF and began both the Facility Master Planning (FMP) and Environmental Impact Report (EIR) process.

The FMP was completed in December 2016, confirming the technical suitability of the SBB site and demonstrating that new membrane bioreactor (MBR) technology, coupled with advanced water treatment, would produce very high quality treated water. The recently completed Master Reclamation Plan



confirmed feasibility for the super-clean treated water to be injected into our aquifer where a natural environmental process will further purify the water, before it is pumped, treated and distributed to homes and businesses. The EIR is on track with a draft to be released this summer for public comment before consideration by the City Council in the fall.

A new sewer rate study, detailing the effect of the project on existing rates, will be presented to the City Council on April 25th. If pursued, water independence means the City would be able to pump enough

water to supply all our needs, instead of paying for and relying on the State Water Project. Such independence will allow the City to exercise local control over our water supply, have cost certainty on future water costs instead of being subject to the financial uncertainty of the future costs of State Water: and mitigate the risk of being cut off from State Water by another drought, a natural disaster, or major maintenance or system failure.

TASKS ACCOMPLISHED SINCE SUMMER 2016

- Selection of preferred site at South Bay Boulevard
- Memorandum of Understanding (MOU) with property owner in place confirms the City's option to purchase 30-acre site
- Draft Facility Master Plan (FMP) completed
- Environmental Impact Report (EIR) underway (Draft to be released in Summer 2017)
- Preliminary modeling of Morro Valley groundwater confirms supplementing ground water supply is an option to provide Morro Bay water independence
- Wastewater collection system flow monitoring
- Draft Master Water Reclamation Plan (MWRP) completed (partially grant funded)
- State Revolving Fund Planning Loan for \$10.3M approved
- Updated Sewer Rate Study Update underway, to be completed in April



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For more information, and to sign up for email updates and meeting notices visit: www.morrobayca.gov/WRF

Mayor Irons, Mayor Pro-Tem Heading, Council Member Makowetski, Council Member McPherson, Council Member Davis

PROJECT GOALS

ENERGY RECOVERY DESIGN FOR ENERGY RECOVERY

This goal envisions a renewable energy component of the project that produces much of the electricity required to operate the WRF.

ADVANCED WATER TREATMENT PRODUCE TERTIARY DISINFECTED WATER

This is one of the highest levels of treatment defined by the State of California and includes filtration and disinfection steps far beyond our existing WWTP. The safe, clean water produced by this process is used across the state to irrigate landscaping and food crops. It can be further treated to directly recharge the groundwater aquifers from which we draw our drinking water.

ON-SITE COMPOSTING ALLOW FOR ON-SITE COMPOSTING

Composting is a process that decomposes the organic portion of the residual solids after water is removed from wastewater, resulting in a harmless biosolid that can be used for mulch and fertilizer.

The FMP recommends composting at a regional facility to reduce potential impacts on neighbors.

OTHER MUNICIPAL USES ALLOW FOR OTHER MUNICIPAL USES

This goal envisions allowing for other City services to co-locate at the WRF site as appropriate. The intent is to improve the overall efficiency of providing such services, and potentially open up oceanfront property (where some of these services currently are) for more appropriate long-term uses. The EIR will consider alternatives to accomplish this goal.

Preferred Site Selection is Complete

On June 14, 2016, the City Council selected the South Bay Boulevard site (shown on the cover) for further detailed planning efforts leading to construction of a new facility. The site was chosen for many reasons, including:

- Located far from residential neighborhoods with low visibility from public roadways
- Allows for flexible engineering and design
- Provides opportunities to minimize impacts to environmental resources

The City entered a memorandum of understanding with the property owner and has begun the formal Environmental Impact Review (EIR) process for building on this site. Based on the Notice of Preparation distributed in August 2016, the EIR will include detailed technical studies on a range of environmental issues. The Draft EIR is expected to be released for public review in Summer 2017.



Draft Facility Master Plan is Complete

The Draft Facility Master Plan (FMP), released in November 2016, provides a roadmap and budget for a new, cost-effective WRF that meets our community goals. During community workshops, WRF Citizen Advisory Committee meetings, and Council meetings, the City received input and direction that informed the FMP. The following conclusions were reached:

- A lift station near the existing WWTP and pipelines along Quintana Road will convey wastewater to the new site
- Equalization storage is needed to handle wastewater flows during wet weather
- The City can meet its goals using Membrane Bio Reactor technology
- Participation in a regional composting operation, not composting or drying sludge at the site, will be most cost effective
- Advanced water treatment at the WRF will produce water that is pure enough to be blended with City groundwater supplies
- The WRF can be placed on the site to minimize visibility from HWY 1

For more information on the Draft FMP: www.morrobaywrf.com/draft-water-reclamation-facility-master-plan-nov-2016

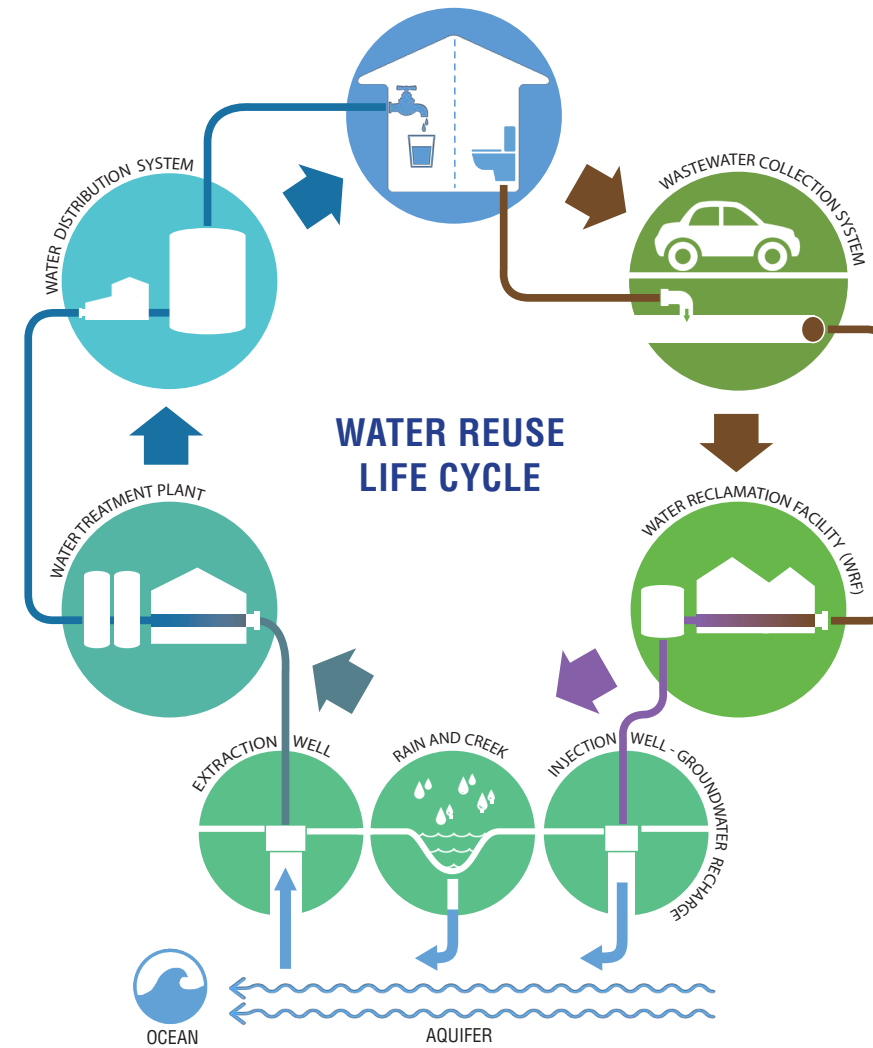
The Draft Water Reclamation Plan is Complete

The Draft Master Water Reclamation Plan (MWRP), paid in part by a State grant, was developed to assess recycled water opportunities and projects in light of the new WRF project. The MWRP also develops cost opinions for feasible project alternatives such as:

- No recycled water project (continue to discharge treated water to the ocean)
- Exchange with agriculture land owners
- Urban irrigation and commercial reuse
- Groundwater recharge (injection wells)

The highest potential water supply benefit for Morro Bay would be realized through groundwater recharge. Preliminary modeling confirms the ability to augment water supply without risking seawater intrusion. The MWRP recommends pursuing a groundwater recharge project and identifies the next steps.

For more information on the Draft MWRP: www.morrobaywrf.com/draft-master-water-reclamation-plan-march-2017



Water Independence

The Draft MWRP confirms the City can reclaim and reuse approximately 800 acre-feet of water a year by recharging the Morro Valley groundwater aquifer, and safely extract 900 – 1100 acre-feet of groundwater per year. A groundwater recharge project plus the ability to treat seawater as needed to meet demands allows the City to locally control its water supply, lower the future cost of water, and redirect the allocation of State Water Project water to other communities in the region.

WATER REUSE LIFE CYCLE*

- 1 WASTEWATER COLLECTION SYSTEM**
 - Water and waste from homes and businesses is collected through plumbing
 - Laterals connect to the City's existing collection system
 - A network of pipes and lift stations transport the water and waste to the new WRF lift station
- 2 WATER RECLAMATION FACILITY (WRF)**
 - WRF provides physical, biological, and chemical treatment for wastewater
 - The water then undergoes full advanced treatment to produce water for groundwater recharge
- 3 GROUNDWATER RECHARGE**
 - Highly treated recycled water from the WRF is pumped to groundwater injection wells located in the Morro Valley
 - The injection wells will be located in the lower Morro Valley aquifer, likely west of the Highway 1/Highway 41 interchange
 - The recycled water co-mingles with groundwater and travels through the aquifer
 - The City's groundwater wells capture a blend of groundwater and recycled water
- 4 WATER TREATMENT PLANT**
 - Groundwater pumped from the Morro Valley is treated at the City's existing Water Treatment Plant using reverse osmosis and disinfection
- 5 WATER DISTRIBUTION SYSTEM**
 - Treated water is distributed throughout the City using a network of storage tanks, pump stations, and pipelines

* Proposed Indirect Potable Reuse (IPR) Process

PROJECT TIMELINE



** Recycled water delivery system could be constructed concurrently or after completion of the WRF. Concurrent construction would reduce overall costs.