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PRESS RELEASE

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Morro Bay Completes Master Water Reclamation Plan City Can Achieve Water-Independence

Allows for Transfer of State Water Allocation to More Needful Communities

A Master Water Reclamation Plan completed on March 21 by the City of Morro Bay details water reuse opportunities and cost details for the recycled water component of the City's new Water Reclamation Facility (WRF). The final plan confirms the City can reclaim and reuse ~800 AF (acre feet) of water a year, allowing the community to achieve water independence, lowering the future cost of water, and redirecting the City's 1300 AF allocation of State Water Project water to other communities in the region.

Morro Bay is on track to build a modern Water Reclamation Facility by June 2021 that meets the community's Council-approved critical goal of "advanced water treatment" to produce and reuse reclaimed water for a total project cost of up to ~\$141M, before a construction contingency of ~\$26M.

"This is a huge project for our small community," said Councilmember John Headding, "and I am looking forward to continued robust community discussion in the days and months ahead as this plan is reviewed by the City Council next week and then, along with our water rate study, by our WRF Citizens Advisory Committee, Citizens Finance Advisory Committee and Public Works Advisory Board in April."

The full water recycling aspect of the project will allow the City to achieve locally-controlled water independence, no longer dependent on state water supplies which are drought-affected and likely facing substantial cost increases that cannot be controlled locally in the decades ahead. Water independence reduces the risk of losing access to state water due to earthquake, climate change or other natural disasters.

Coupled with the Facility Master Plan completed in December, the Master Water Reclamation Plan provides the final engineering data and estimates required to finalize project timeline and cost. The new plan confirms that instead of a seven-year construction timeline, the City can complete both the water treatment and the water recycling aspects of the project simultaneously, reducing the construction timeline for the entire project from seven to five years.

The key finding of the study is that the City can achieve Indirect Potable Reuse (IPR) of all the highly-treated water coming out of the WRF, and then, following strict regulating guidelines and relying on the aquifer as an environmental buffer, can reuse this water as a source of drinking water.

For Morro Bay, the system will work as follows:

- Approximately 1,000 AF/yr of wastewater will be treated at the primary WRF facility on the City's preferred South Bay Boulevard site.
- At the WRF, following initial treatment likely using Membrane Bio Reactor (MBR) technology, the water will be further treated by ultra-violet disinfection, reverse osmosis, and advanced oxidation processes, resulting in one of the highest levels of effluent purity technologically available.
- This super-clean recycled water will then be pumped and injected into a sub-aquifer that lies at the western end of the Morro Valley, under an area roughly bounded from Miners Hardware to Morro Rock, and from the Cloisters to the Veterans Memorial Hall.
- The study looked closely at this sub-aquifer, including running various models of locations of ground water injection wells, and determined the City can inject up to 800 AF/yr of reclaimed water into the aquifer. This aquifer is already the location of the City's primary potable wellfield and the study confirmed the City can pump up to 1,100 AF/year out of those wells without causing any seawater intrusion or other adverse environmental effects. (The City has an existing right to pump ~580 AF/yr from this aquifer and the additional 800 AF/yr from groundwater injection will increase availability to ~1,380 AF/yr.)
- The study further confirms that any water introduced into the ground will seep through the "environmental buffer" in the aquifer for at least 2-6 months before being pumped out – thereby adding a further important level of purification and consumer safety.
- Water pumped out of the City's Morro Valley wells would then be further treated at the City's water treatment plant before being introduced into the City's water system for public use.

Similar systems of water reuse are being implemented by many communities including Orange County, the City of Oxnard, and City of San Diego to supplement their clean water supply. Other communities, such as Atascadero, use a form of indirect reuse where the treated effluent from a wastewater treatment plant is discharged in ponds where it soaks into the aquifer and then, some distance "downstream" is pumped and treated for drinking water.

The study closely examined several reuse alternatives, including urban reuse ("purple pipe irrigation"), agricultural exchange, and examined the cost of a new wastewater treatment facility without any recycled water component in which the effluent was dumped back into the ocean. The IPR option which is consistent with the City's adopted project goals provides for the highest and best use of the recycled water.

The total project cost of \$141M (before contingencies) was developed using detailed engineering estimates based on both the Facility Master Plan and the Master Water Reclamation Plan and is for the entire WRF project including full IPR recycling and reuse. This total includes essentially every associated cost including the acquisition of land, planning and permitting, design and construction of both the treatment system and the IPR reuse system, and demolition and remediation of the existing 62-year old WWTP that sits in a flood plain on the beach.

Achieving water independence, lowering the cost to purchase water, and mitigating the risks of the likely increases in the future cost of State Water remain significant benefits confirmed by the study. Resiliency.

"I think it's vital that the City become 100% water independent and that's what we're shooting for with this project," Councilmember Robert "Red" Davis said. "We don't know how expensive State Water will become in the future and we don't know what climate change will do to us. We have to be able to produce our own clean drinking water."

With the study confirming the City will be able to pump all its water from the newly identified sub-aquifer that will be recharged with recycled water, the future costs of producing water are expected to drop significantly. The City currently pays around \$2,200/AF for state water, a number that may increase significantly in the years ahead as infrastructure projects such as repair of the Oroville Dam and the proposed water tunnels under the delta are managed in Sacramento. With the WRF project completed, the City will be able to pump and treat water for around \$1,000/AF. This will allow for a reduction in water costs of around \$1.2M a year, or \$36M over 30 years.

"We must carefully control the costs of this important project," Councilmember Marlys McPherson said, "but now that the total project cost is known it is important to remember that it can be offset by \$1.4M a year of savings as we reclaim and reuse our precious water resource." She added that the benefit of achieving water independence is extremely valuable.

The Master Water Reclamation Plan was based on important hydrology work performed by GSI Water Solutions of Atascadero and produced by the City's Program Management firm, MKN Associates of Arroyo Grande.

"It is pretty impressive to see how far we have come in one year", said Dave Buckingham, Morro Bay's City Manager. "A year ago today the City had an important set of project goals and was in the process of identifying a preferred site. Today we have an MOU in place for purchase of our preferred South Bay Boulevard site, the Facility Master Plan is complete, we've now completed a Master Water Reclamation Plan that identifies how the community can become water independent, and the Environmental Impact Report is in progress to be certified by the City Council late this year." The City is on track to complete this project in June 2021 within the project budget provided in this study.

The City Council is scheduled to conduct an initial review the Master Water Reclamation Plan at their March 28 meeting at 6pm in Veteran's Memorial Hall in Morro Bay. Following that, a new sewer rate study will be released and reviewed, along with the Master Water Reclamation Plan, by the WRF Citizens Advisory Committee on April 4, the Citizen's Finance Advisory Committee on April 18, the Public Works Advisory Board on April 19 and by the City Council on April 25.