

2018 WATER RECLAMATION FACILITY POND LINING DESIGN PROJECT

City Council Meeting
April 16, 2018



Recommended Council Action

Adopt a Resolution approving a professional services agreement with West Yost Associates to provide services during the design, bidding, and construction phases necessary to rehabilitate the Wastewater Reclamation Facility's Ponds 1, 2, and 3 for an amount not to exceed \$212,146; and increasing budget appropriations in the Wastewater Capital Replacement Fund by \$233,361



Background

- The wastewater plant was originally constructed in the 1970's as a facultative pond plant
- Wastewater flowed sequentially through four ponds to obtain treatment



Healdsburg Water Pollution Control Plant, circa 1972, was a facultative pond plant



Background

- The 2008 Water Reclamation Facility (WRF) anticipated some storage and provided a separate 25 MG storage pond
- One of the original ponds was repurposed for equalization and three ponds were taken out of service (decommissioned)



The WRF has space for additional storage

Repurposed Pond



Background

- More storage is desirable to manage the recycled water program
 - During the discharge prohibition period (May 15 to September 30) storage provides a destination for recycled water when users are not taking it early in the season
 - Additional storage would be beneficial when the recycled water program is more established to impound water in advance of the irrigation period, should required deliveries exceed WRF flow rate



Background

- The existing 25 million gallon pond is suitable for roughly 1.0 mega-watts of floating solar
- Adding liners to the decommissioned ponds would allow an additional 0.8 megawatts of solar
- Floating PVs serve a dual benefit of reducing algae growth while providing clean electricity for the WRF



Ponds need to be lined prior to PV installation



Background

- Lining process would include:
 - ü Removal of vegetation and accumulated sludge
 - ü Grading in the ponds
 - ü Installation of the liner
 - ü Piping modifications to allow recycled water to move in and out



Requiring proper subgrade prep is key to a successful pond lining installation



Proposal Process

- Staff solicited proposals to prepare plans, specification and estimates for bidding and construction of the pond lining and piping modifications
- The highest rated proposal was provided by West Yost Associates, whose team has designed many similar pond lining projects



Alternatives

- The pond lining is a predecessor to maximizing the PV installation anticipated under the NCPA Second Phase Agreement
 - The NCPA's design team could be tasked with the pond lining
 - This approach would reduce the City's control of the pond design and piping modifications; potentially delaying the PV work
 - Staff does not recommend this alternative



Fiscal Impact

- Recommended approach of a City led and controlled pond lining design

Estimated fee for design and construction support services	\$212,146
Contingency for unforeseen issues (10% of estimated fee)	<u>\$21,215</u>
Total	✓ \$233,361



Recommended Council Action

Adopt a Resolution approving a professional services agreement with West Yost Associates to provide services during the design, bidding, and construction phases necessary to rehabilitate the Wastewater Reclamation Facility's Ponds 1, 2, and 3 for an amount not to exceed \$212,146; and increasing budget appropriations in the Wastewater Capital Replacement Fund by \$233,361



Questions?

