

Lake Don Pedro Community Services District

Special Meeting of October 21th, 2016

AGENDA SUPPORTING DATA

2. SPECIAL MEETING ACTION ITEMS

- a. Adoption of a Resolution Approving Unanticipated and Unbudgeted Expenditures for the Emergency Renovation and Restoration of the Water Treatment Plant Filters.
- b. Adoption of a Resolution Approving an Emergency Declaration Regarding the Repair and Restoration of the Water Treatment Plant Filters in Accordance with California Public Contract Code §§ 22035 AND 22050.
- c. Adoption of a Resolution Approving a Contract with ERS Industrial Services, Inc. for Completion of the Emergency Repair and Restoration of the Water Treatment Plant Filter #1.

Recommended Motion

Staff recommends the following motions:

1. I move to adopt Resolution 2016-___ Approving Unanticipated and Unbudgeted Expenditures for the Emergency Renovation and Restoration of the Water Treatment Plant Filters
2. I move to adopt Resolution 2016-____, Approving an Emergency Declaration Regarding the Repair and Restoration of the Water Treatment Plant Filters in Accordance with California Public Contract Code §§ 22035 AND 22050
3. I move to adopt Resolution 2016-____, Approving a Contract with ERS Industrial Services, Inc. for Completion of the Emergency Repair and Restoration of the Water Treatment Plant Filter #1

Background

District operations staff has been troubleshooting problems with operations of the water filters for several months. The filter run, which is the time the filters can operate before needing to backwash, has been reducing significantly resulting in increased staff treatment plant operating time, as well as increased chemical, electricity and water consumption; and waste.

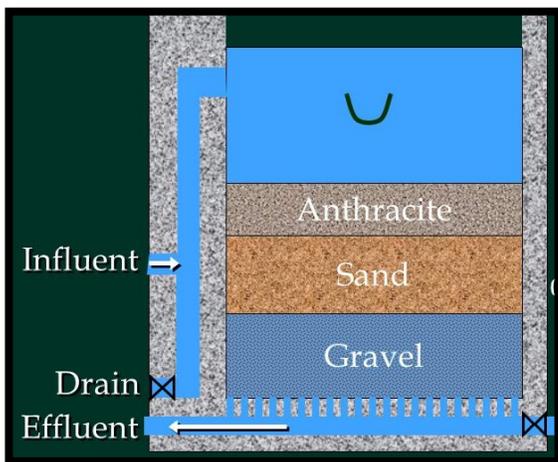


Figure 1

The District treatment system consists of four filters contained within two pressure vessels. During normal operation, water is pumped in the top of the filter and exits the bottom after passing through layers of inert media, filtered clean. With proper function of the filter, the water purifying media as shown in Figure 1 will last for many years based on the quality of the raw water, chemicals used, and regular maintenance. For the District, maintenance consists of routine visual inspections by operators, and more detailed media and function inspections conducted by filter contractors with specialized equipment. District staff can conduct limited visual inspections of the inside of the filters, where a portion of the piping can be seen and the surface of the

filter media observed. District staff inspection can reveal primarily piping system and interior coating failures as well as problems with the top layer of media such as mudball formation as shown in Figure 2; which typically indicates the need for a more detailed inspection by a filter specialist.

Attached hereto is a memorandum from District Engineer Elizabeth Binkley summarizing their experience with the history of the District's filters, maintenance performed and recommendations to proceed with the immediate renovation of the filter. As detailed in Binkley's memo, the filter media was replaced between 1998 and 2003, and I can personally attest that it was completed in 1998. After that first renovation, professional inspections were done every two years per industry standards through 2009 until they were discontinued. A filter inspection was scheduled for October 2016, at which time the current filter defects were discovered as further discussed below.



Figure 2

ERS Industrial Services was hired to perform a routine detailed inspection of the filters, and multiple critical problems were identified, including broken piping, clogged wash jets, rusted and deteriorated lateral couplings, and failed areas in the steel bulkhead wall separating the filter cells as shown in the photos below.



Broken Surface Wash Piping



Rusted effluent manifold couplings



Clogged Surface Wash Nozzles



Rusted Coatings and Pipe



Severe Rust Around pipe penetrations



Corrosion, Holes and missing Coatings at Bulkhead

As the media was determined to be completely fouled, ERS was initially contracted on an emergency basis to simply remove and replace the filter media. The attached media replacement scope of work included herein as Exhibit B. After complete removal of the media, the root cause of the hydraulic filtering problems and media failure was identified. ERS has also provided a turnkey proposal for renovation of the filter; attached hereto as Exhibit A.

We currently are operating on only one filter vessel, which is very risky and may fail fairly soon if the problem is not addressed. Operating only on one filter will jeopardize certain aspects of our regulatory compliance and can produce unreliable water quality and very high backwash water waste and associated costs. The failed filter must be repaired immediately; and the work will take two weeks if started today. And, due to the condition of the first filter, we can anticipate some level of similar repairs also needed in the second filter vessel.

Filter renovation was not included in the 2016/17 fiscal year budget. Staff recommends that the Raw Water Line Replacement Project in the amount of \$250,000 be held over until the 2017/18 fiscal year to provide funding adequate for the renovation of both filters. The attached resolution authorizes proceeding with the renovation of filter 1, with the cost of any necessary filter 2

renovations being presented separately to the Board at a future meeting following completion of filter 1 and inspection of filter 2.

Also included on this agenda are self explanatory resolutions declaring an emergency to allow the District to avoid the competitive bidding process; which would add approximately \$30,000 to the project costs and up to four months of planning and bidding time, and awarding the contract to ERS Industrial to allow for immediate start of construction. Staff has reviewed construction costs for similar projects in neighboring areas and has determined the proposed pricing to be comparable both in other ERS constructed projects, as well as media replacement projects completed by other similar contractors. ERS has been performing filter renovation work for the District since its inception and has an excellent reputation in the industry.