

**City Manager's Report****October 8, 2019 City Council Meeting****Prepared By: Mark Liebenow, Water Reclamation Facility Supervisor****Item#: 12.2****Subject:** Adopt a Resolution:

1. Approving an agreement with ERS Industrial Services, Inc. in the amount of \$187,355 for the Modular Treatment Unit Servicing (CIP#41901) and \$47,685 for the Water Reclamation Facility Pressure Filter Replacement project (CIP#42008) for a total amount of \$235,040; and
2. Authorizing the City Engineer to execute the same.

Purpose: The Modular Treatment Units (MTU) at the Hangtown Creek Water Reclamation Facility (WRF) are used in the tertiary treatment process to assist in compliance with Title 22 tertiary recycled water requirements. MTU #1, located at the WRF, is in need of full servicing prior to the onset of winter rains.

Background: The WRF processes the City's wastewater through what is known as a tertiary treatment system. This method allows for treatment of wastewater to a higher quality prior to discharge into sensitive water courses, in the City's case, Hangtown Creek. The treatment process includes the use of sand filters, clarifiers (settling tanks that remove solids), and sterilization/UV beds (Ultraviolet light treatment) as a method to reduce/eliminate pathogen content in the effluent.

The Modular Treatment Units (MTU) are used to clean the Secondary Clarifier Effluent to Title 22 tertiary recycled water requirements just prior to discharge into the creek, making the water safe for the environment and future use by the community. The MTU accomplishes this task through the use of two Micro Floc Gravity Filters and the addition of a coagulant to the water. The wastewater is then treated through an up-draft clarifier to remove larger particles, continuing through a multi-layered sand filter to remove smaller particles. From that point forward, the treated wastewater travels to the UV beds for the final disinfection process prior to discharge into Hangtown Creek.

Discussion: The WRF has a total of two MTUs in operation as part of the treatment process and both have been in constant operation since the 2008 upgrade of the facility 11 years ago. Both have necessitated multiple repairs and sand media additions. The chemical resistant paint on the MTUs has begun peeling and there are numerous areas of rust that need to be addressed. Both types of media will need to be removed and the bottom half of the units will be disassembled and inspected for damaged. If damage is observed, the unit will need to be repaired. Following any potential repairs, the unit will be sand blasted, cleaned, and re-painted. Primary media will be replaced and

new sand media will be installed. The unit will be tested, and then put back into operation. This inspection/repair should take place every 8 to 10 years in order to ensure a long filter life.

As part of the MTU service, it's also highly recommended that the four pressure filters that operate with the two MTUs also be serviced. The pressure filter service includes removal and disposal of filter media from each of the four horizontal pressure vessels. Servicing of the pressure filters will also ensure that MTU #1 remains in good working order following its servicing as part of this contract. MTU #2 will remain operational as this work is done through staged servicing of the pressure filters (2 at a time) while servicing MTU #1.

The Modular Treatment Units servicing project (CIP#41901) was approved on June 26, 2018 by the Council under adoption of the Fiscal Year 2018-2019 Capital Improvement Program Budget. The Water Reclamation Facility Pressure Filter Replacement project (CIP #42008) was approved on June 25, 2019 by Council under adoption of the Fiscal Year 2019-2020 Capital Improvement Program Budget. These projects included the full servicing of one of the two MTUs at the WRF (MTU #1) due to the cost of the project and available funding at the time. The original estimated amount was \$188,869.00, with Measure H cited as the funding source. Due to the pressure filters need for servicing as well, it's recommended that this work be done concurrently. Staff solicited proposals for the MTU servicing and received one from ERS Industrial Services, Inc. in the amount of \$158,141.41. After a discussion with staff, a revised scope and quote was requested of and submitted by ERS in the amount of \$139,670.00, with a savings of \$18,471.41. Knowing that servicing the four pressure filters is an integral part of the MTUs process performance and complete servicing, a quote was requested by staff. The quote came in at \$25,990.00 per pressure filter, or \$103,960.00 for all four pressure filters. Again, after a discussion with staff, a revised scope and fee was requested to address the pressure filters as part of the MTU project mobilization to the WRF. ERS provided a revised scope and fee of \$95,370.00 for all four pressure filters, with a savings of \$8,590.00 for delivery of both projects concurrently. These efforts resulted in an overall savings of \$27,061.41 and a total contract value of \$235,040.00 for concurrent delivery of both projects. ERS Industrial Services, Inc. has been inspecting and repairing the City's tertiary filtering units for more than twenty years and are very familiar with the WRF's system and operations. Their performance history with WRF operations and servicing has been positive and the proposals received were deemed thorough and complete for serving of MTU #1 and the Pressure Filter Replacements.

Staff recommends approval of an agreement with ERS Industrial Services, Inc. for the full servicing of MTU#1 and of all four pressure filters. It is staff's intention to recommend an additional project for full servicing of only MTU#2 as part of the proposed Fiscal Year 2020/2021 Capital Improvement Program Budget.

Options:

1. Approve per staff's recommendations.
2. Direct staff to take other actions.

Cost: The cost associated with the proposed agreement with ERS Industrial Services, Inc. for the Modular Treatment Unit Servicing project (CIP#41901) and Water Reclamation Facility Pressure Filter Replacement project (CIP #42008) totals \$235,040.00.

Budget Impact: The City Council adopted the Fiscal Year 2018/2019 Capital Improvement Program Budget which appropriated \$188,869 for the Modular Treatment Unit Servicing project (CIP#41901). The City Council also adopted the Fiscal Year 2019/2020 Capital Improvement Program Budget which appropriated \$60,000 for the Water Reclamation Facility Pressure Filter Replacement project (CIP #42008) for a combined project budget of \$248,869. The total proposed contract amount of \$235,040.00 with ERS Industrial Services, Inc. is within the total combined project budget of \$248,869 as shown below:

| Description | CIP #41901 | CIP #42008 | Total |
|-------------------------------|-----------------|------------------|------------------|
| Adopted Project Budget | \$ 188,869 | \$ 60,000 | \$ 248,869 |
| ERS Industrial Services, Inc. | 187,355 | 47,685 | 235,040 |
| Under/(Over) Budget | \$ 1,514 | \$ 12,315 | \$ 13,829 |

Recommendation:

Adopt a Resolution:

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2. Authorizing the City Engineer to execute the same.


 M. Cleve Morris, City Manager


 Rebecca Neves, City Engineer

Attachments:

- A. Resolution