

DOMESTIC WATER POLICY COMMITTEE

Meeting Minutes

October 12, 2023

1. Call to Order/Roll Call

Foster called the meeting to order at approximately 8:31 a.m.

Present:

City of Modesto (COM): David Wright
City of Modesto (COM): Jeremiah Williams
Modesto Irrigation District (MID): Nick Blom
Modesto Irrigation District (MID): Robert Frobose

Other Attendees:

Jeremy Parnell, COM
Jimi Netniss, MID
Josh Foster, MID
Jennifer Wright, MID
Elizabeth Martinez, MID

2. Public Comment

N/A

3. Approve June 8, 2023, Meeting Minutes [[Action item](#)]

Wright moved, seconded by Williams. Motion carried.

4. 2024 Domestic Water Budget

2024 Domestic Water draft O&M budget proposing a 13.4% increase over previous year. Increase driven primarily by Operations and A&G projects.

- Domestic Water Admin – Modesto Regional Water Treatment Plant administrative costs. ~17% increase over previous year and related to adjustments in labor & benefits, outside services and admin & general projects.
- Domestic Water A&G – Administrative and general overhead for District support of the Modesto Regional Water Treatment Plant. ~12% increase over previous year and covers expected increases in the indirect costs related to the various Districts departmental support of the treatment plant (HR, IT, Safety, Finance, etc.).
- Domestic Water Operations – WTP operating costs for chemicals, energy, and outside contracts for conventional, membrane and distribution systems operation. ~11% increase over previous year. Substantial increase in labor & benefits due to the addition of (2) full time Apprentice Operators. Most other cost types for this project saw a decrease from last year.

- Domestic Water Laboratory – Required regulatory and process control compliance testing. ~31% increase over previous year. 45% increase in labor & benefits due to the addition of (1) full time Lab Technician I. Additional tech is needed to assist with expected increase in labor demand with the implementation of the new ELAP (Environmental Laboratory Accreditation Program) regulations taking effect in 2024. Slight increase in materials and supplies for the anticipated increase in testing due to these new regulations.
- Domestic Water Maintenance – Modesto Regional Water Treatment Plant Maintenance services including spare parts. ~12% increase over previous year. Materials and supplies increased 88% to accommodate for the significant increase in both material and shipping costs. Outside services reduced 20% to better match actuals as we shift most major work to capital.

2024 Domestic Water draft capital budget proposing (7) projects overall and roughly doubles the previous year's budget at ~\$3M. Two projects in general account for up to 80% of this increase in costs and are noted below.

- Filters 1 & 2 Rebuild – Rebuild conventional filters #1 & #2. Replace media, upgrade underdrain assemblies, rebuild effluent valves. Conventional filters are 30 yrs. in age and well beyond their typical life expectancy of 20 yrs. ~\$2.2M to complete a full rebuild of these filters depending on inspection findings.
- Membrane Blower Installation – Install newly purchased membrane blower expected to arrive first quarter of 2024. ~\$200K for engineering, electrical and construction to tie new blower into the existing system.
- Raw Water PH Control – Design and install a raw water pH control system to combat the unpredictable pH swings in our raw water from the Modesto Reservoir. High pH negatively affects our disinfection systems, increases treatment costs, and contributes to an increase in disinfection by-product formation ~\$150K reserved to start the engineering design work for a permanent control system.
- Terminal Reservoir Switchgear Upgrade – Upgrade Terminal Reservoir Switchgear components. Switchgear is outdated and vulnerable to conditions that could potentially disrupt power to the distribution system and downstream substations. Prolonged periods of down time could also negatively affect water quality for the City of Modesto. Estimated costs of ~\$400K.
- Y-01 Conventional Valve Replacement – Replace conventional treatment plant feed control valve. Valve is an original unit installed in 1994 and is showing signs of failure. Without proper control of this valve, we cannot operate the convention treatment plant. ~\$50K estimated to replace valve.
- Lab Fridge – Remove and install a new pass-through fridge for lab. The fridge is beyond its life expectancy, unsupported and a regulatory requirement that stores critical samples, reagents, and other temperature sensitive materials. \$18K estimated for replacement.

- Lab Incubator – Lab incubator purchase and installation. Incubator has reached its life expectancy and no longer supported by manufacturer. Was slated to be replaced under 2023 capital budget but funds had to be reallocated to purchase water purifications systems that unexpectedly failed in the lab. ~\$12K estimated for replacement.

5. Domestic Water Project Update

- Domestic production total as of 10/1 = 13,968 AF; previous year at this time = 12,539 AF; difference of ~1,430 AF. 5 yr. running average for this time = 14,890 AF.
 - Conv. plants average ~20 MGD.
 - Membrane plant has averaged ~9.6 MGD for a total average delivery of ~29.6 MGD for the current water year.
 - 44% of allocation delivered to date.
 - City to switch over to the winter watering schedule starting Nov. 1st from 3-2 days/week which will decrease demand.
- System pressures have been maintained between 58-62 psi and demand has been met as requested by City.
- **Operations:**
 - **Staffing:** Operations fully staffed with an overall head count of 10 operators. Provides the additional flexibility needed to cover various LOA's (FMLA, Baby bonding, illnesses, and other extended absences) and meet the operational demand of the dual treatment facility. Seeking additional FT Lab Technician to meet the anticipated increase in labor demand due to the new ELAP/TNI (Environmental Laboratory Accreditation Program/The Nelac Institute) regulations being implemented as of Jan 1st, 2024.
 - **Membrane Repairs:** Operations & maintenance staff made several repairs of the membrane basins (fiber leaks, crack repairs, valve rebuilds, etc.). The system is operating very well and producing very good water quality.
 - **ACH Dosing:** Started dosing aluminum coagulant in front of membrane process on May 13th to aid in organics removal and improve feed water quality to the system. Membranes responded very well and organic removal increased up to 8x the historical average (~5% to over 40%). This helps reduce the formation of disinfection byproducts (regulated) and improve overall water quality for the City of Modesto.
 - **Solids Removal:** Over 560 tons of solids removed from lagoons 1-2; Staff utilized newly purchased Bobcat to help gather the dried solid material which significantly sped up the disposal process. This process usually takes anywhere from 2-3 days but was reduced to one day. Lagoons 3-4 will be cleaned next summer.
 - **Terminal Reservoir:** was operated in bypass mode from June 19th through September 6th. This saved the City ~\$80,000 in electrical costs by bypassing the Terminal Reservoir pump station and delivering directly into the distribution system using the high-rate pumps at the WTP. Most programming and mechanical glitches were resolved so this will be the new operating protocol during peak summer demand.
 - **Winter preventive maintenance projects:** Filter profiling/inspections, sedimentation basin cleanings, Clear wells/TR tank inspections, and other related maintenance tasks.
- **Maintenance:** planning taking place for the ~2-week winter outage from 11/27-12/8 to perform larger maintenance tasks such as:
 - WTP Switchgear replacement

- Plant service pump #3 replacement
- Treated Water Pump #8 discharge valve rebuild.

There are eight primary projects to be completed with a few minor maintenance tasks included in the time frame.

- **Projects:**

- **Chemical Recording & Automation** – project to install additional chemical flow meters and on independent processes so that we can accurately record usage per state requirements. Engineering design completed middle this year and construction contract was awarded to Telstar Instruments in August. Due to the continued backlog in the supply chain (specifically chip based components); project completion is estimated to roll into the 1st or 2nd quarter of 2024.
- **Raw Water pH Study** – Carollo Engineering completed their study to determine the potential impacts a pH control system would have on our finished water quality. Study concluded that a carbonic or sulfuric acid pH control system would have very little to no impact to our overall delivered water quality or corrosion control processes and could benefit the facility by providing steady state influent conditions which will improve the efficiency of the disinfection systems. State reviewed and approved of the study and granted authorization for MID to design/construct a permanent control system. Capital being proposed for 2024 to start the engineering design work for a carbonic acid control system.
- **WTP Switchgear Upgrade** – Electric Power Systems (formerly HART electrical) was awarded the contract in May of 2022 to update and replace old unsupported switchgear components at the treatment plant. EPS enlisted the help of Schweitzer Engineering Laboratories to finalize the electrical engineering design work. Long lead time components were immediately ordered along with other associated materials/supplies. Work scheduled to take place during the planned 2-week winter outage from November 27th-December 8th pending procurement.
- **Lab Remodel** – Bid awarded to Jaureguy’s Design & Construction located in Turlock. Project consists of new flooring, workstations, and chemical storage cabinets/shelving. Construction is scheduled to start in conjunction with the planned winter outage.

While reviewing the recorded meeting, it appears there was a failure in the audio recording Device. As a result, no audio was captured or broadcasted. Our IT department has investigated and corrected the issue and has made provisions to prevent any future incidents.

6. Proposed future meetings

May 9th, 2024, at 8:30am at Modesto Irrigation District Board Room

7. Items too late for the agenda

N/A

8. Adjournment

The meeting was adjourned at approximately 10:15a.m.