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## Seal Rock Water District

General Manager's Report:  
 Board Meeting – October 10, 2024

This report serves as an executive summary for the Board meeting agenda. It provides recommendations for actions to be taken if necessary. Detailed information, staff reports, and supporting materials can be found in the full agenda packet.

### **PHASE-IV BEAVER CREEK SOURCE WATER:**

Water Treatment Plant Operators have been working closely with engineers, WesTech technicians and suppliers to help evaluate ongoing heater element failure at the WTP. Newly installed heater elements placed into operation in March/April of this year are showing signs of failure. One of the elements was removed from service and sent to a metallurgist for further evaluation to determine what is causing the premature failure of the elements. Information provided in the metallurgist's report will help to inform operators and engineers regarding what is negatively affecting the heaters.

District operators received a comprehensive metallurgist report provided by Phoenix National Laboratories, included with the Board Packets. There was notable magnesium (Mg), aluminum (Al), and sulfur (S) associated with the corrosion product along with chlorine (Cl). Chlorine is an aggressive species for stainless steel and with the amount of pitting, was probably the main culprit but the sulfur would also be another one to keep an eye on.

It is important to note that WesTech designed the membrane treatment system to include the recommendation for water treatment and maintenance of the membrane filter skids. Operators have been following design standards and the recommendation of WesTech regarding chemical application.

What we are discovering is that the application of the heater elements seems to be exposing them to chemicals during or after cleaning the membranes. Operators are engaged with Jacobs Engineers, WesTech Technicians, and Chromalox the manufacturer of the heating elements to evaluate system conditions and determine a path forward to resolve this issue. At present, the WTP is running on one of the three heaters which extends runtimes for performing routine membrane cleaning and maintenance. The district has ordered three new heating elements which will arrive in the next couple of weeks. However, at a cost of \$1,150.00 per element, operators are reluctant to install the new elements until this issue can be resolved.

*Seal Rock Water District is an Equal Opportunity Service Provider and Employer.*

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**Heater Photos Taken 2024-08-29 (Samples to Lab):**

Originals: 18 months operation

- Chlorine cleans used 0.8% OSG system (high background chloride content)
- Failure shown is near the flange



Replacements: 3-4 months operation

- Chlorine cleans used 12% sodium hypochlorite (very low background chloride content)
- Failure point shown is at the u-tube end (away from flange)

**Other notable activities for the month include:**

- Attended the Mid-Coast Water Conservation Consortium Meeting.
- Hosted monthly staff/safety meeting.
- Attended Mid-Coast Water Planning Partnership Meeting.
- Attended meetings with representatives from Oregon Water Resources Department (OWRD) committee regarding OWRD Fee-Based programs.
- Attended the monthly Oregon Water Utility Council (OWUC) meeting.
- Staff worked with Jacobs Engineering on final documents for project closeout.
- Attended additional meetings with OWRD and OWUC regarding water rights process improvements.
- Staff met on site with consultants preparing this year's Beaver Creek streamflow and temperature monitoring.