



Filter Media and Underdrain Nozzle
Replacement Project
Board of Directors Meeting
January 22, 2026

Filter Media and Underdrain Nozzle Replacement Project

- CCWA's WTP has eight two-bay, dual-media filters
- In February 2025, due to concerns prompted by repeated backwash system pressure relief events, CCWA completed a filter condition evaluation with Carollo Engineers (Carollo) to understand the cause of the pressure relief events and what remedies are required

Filter Media and Underdrain Nozzle Replacement Project

- Filter condition is a high priority because of their criticality in the treatment process and regulatory compliance
- Not addressing the cause of the backwash system pressure relief events will lead to clogging, head-loss impacts and inefficient backwashes, resulting in WTP capacity reduction

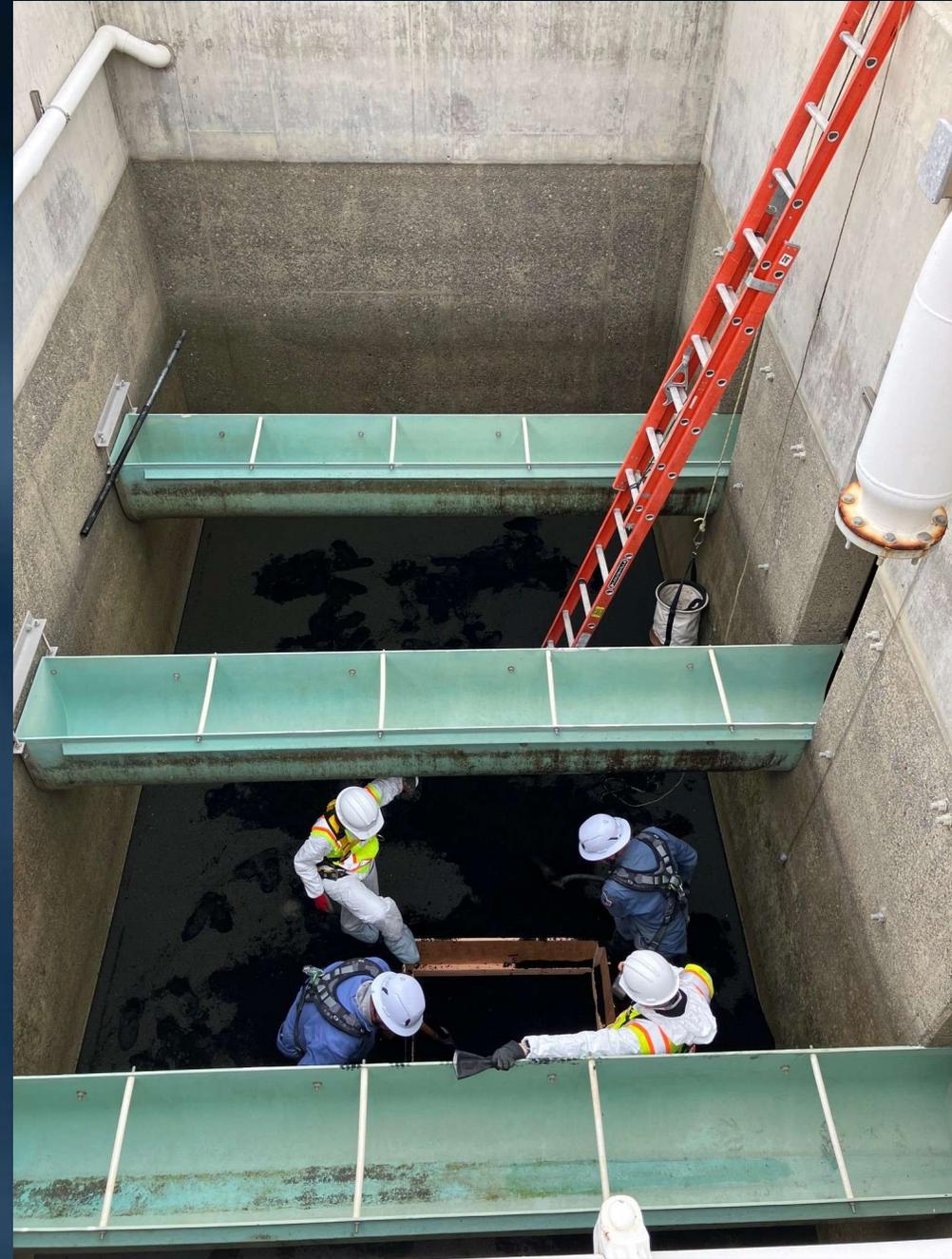
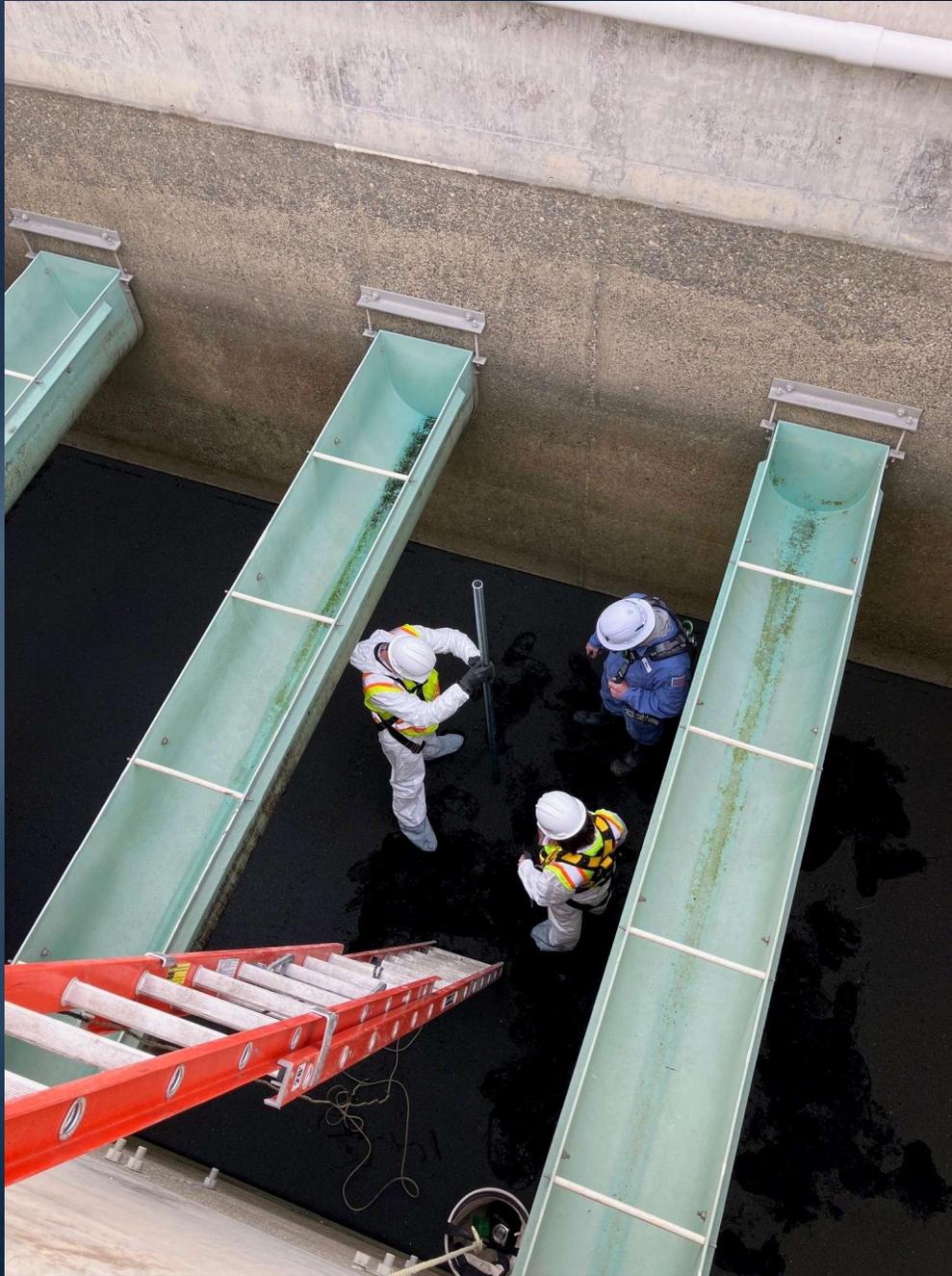
Filter Media and Underdrain Nozzle Replacement Project

- The filter condition evaluation included:
 - Collecting and analyzing samples from the filter media
 - Inspection of filter underdrains
 - Identification of backwash anomalies such as air or water maldistribution
 - Visual evaluation of concrete, backwash troughs, piping, valves and instrumentation

Filter Evaluation



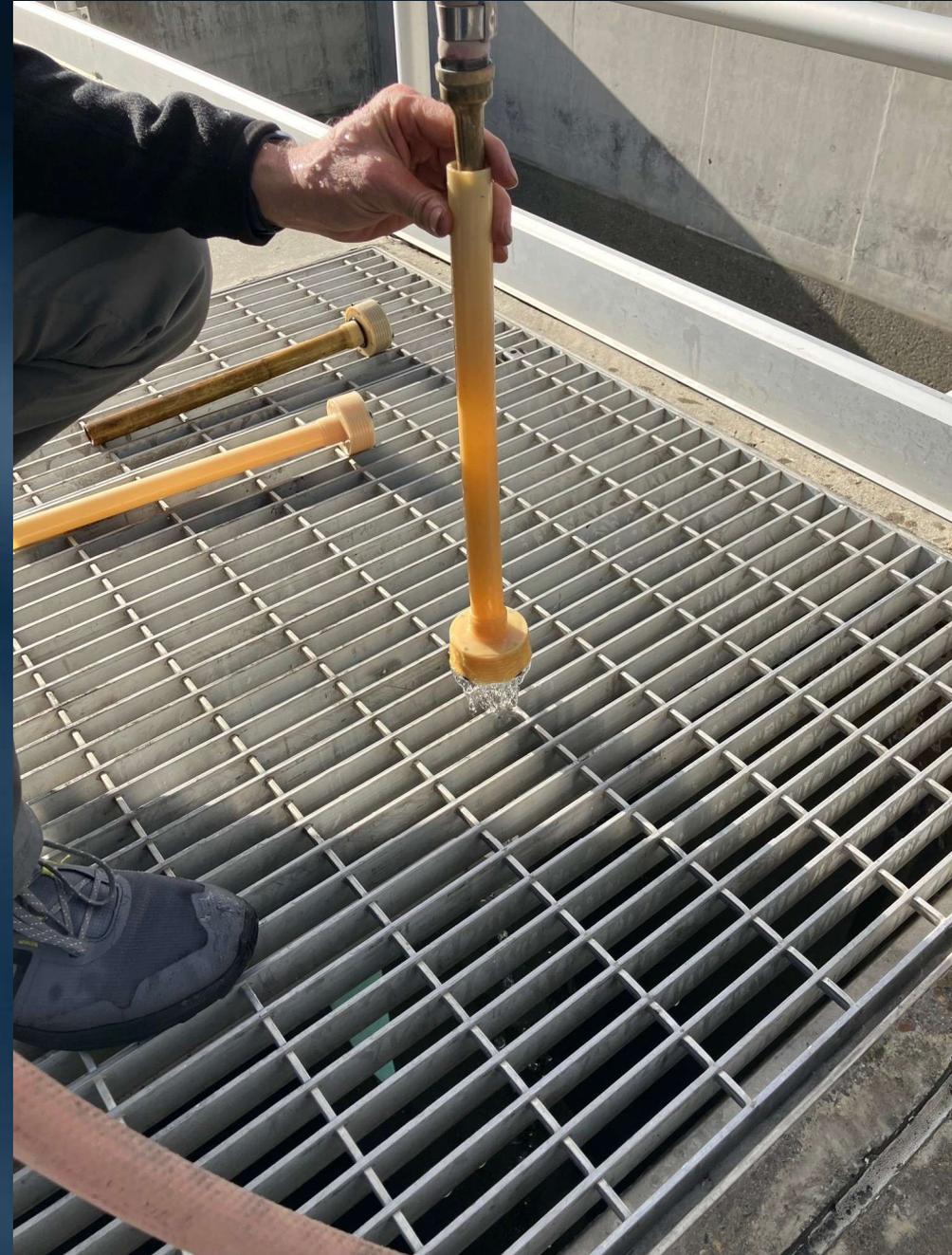
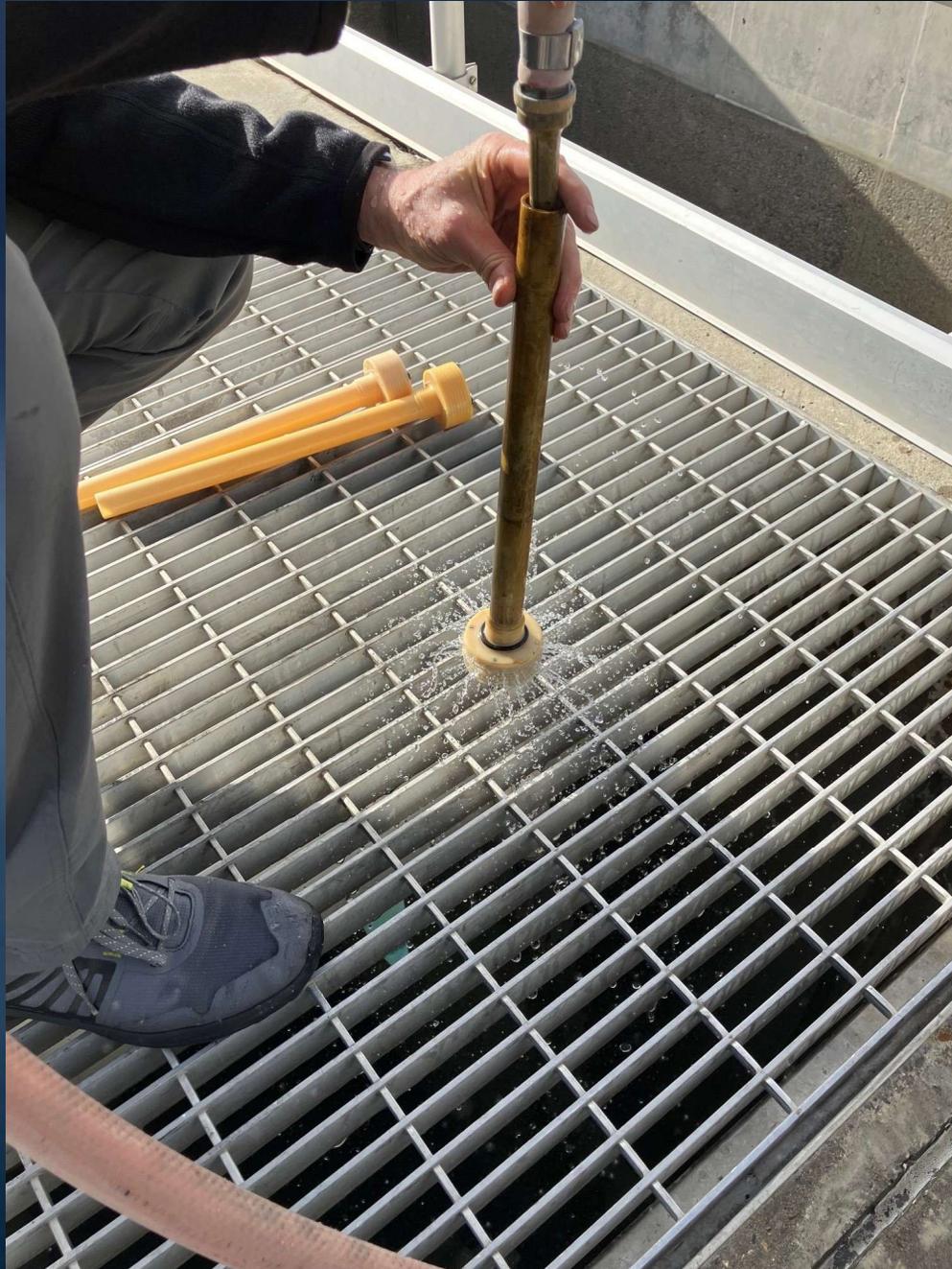
Filter Evaluation



Filter Evaluation



Filter Evaluation



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- Carollo developed the following recommendations after evaluating potential issues with the existing media-retaining nozzles, media and piping:
 - Removing and replacing the existing granular activated carbon and sand filter media;
 - Removing and replacing filter underdrain nozzles;
 - Repairing deteriorated concrete surfaces within the filter basins; and
 - Leveling launders between filter bays without removing the portion cast within gullet walls, if reasonably possible

Filter Media and Underdrain Nozzle Replacement Project

- CCWA prepared a Request for Proposals (RFP) for engineering design services to implement Carollo's recommendations
- The RFP was directly distributed to engineering firms and posted on CCWA's website
- Carollo submitted a proposal in an amount of \$270,200

Filter Media and Underdrain Nozzle Replacement Project

- 2025-26 budgeted funds and available carryover funds include:

Project	Budget/ Carryover Funds
C-25NOZZLE	\$ 157,500
C-23WTPOFF	670,331
C-23GACFMR	7,472
C-21GACFMR	395,000
Total	\$ 1,230,303

