Western Hills Water District

FILTER INSPECTION
REPORT
FOR

Western Hills Water District

FILTER 1

November 4, 2026

PERFORMED & PREPARED

By:

ERS INDUSTRIAL SERVICES, INC.

ERS INDUSTRIAL SERVICES, INC.
2120 Warm Springs Ct. 510-770-0202 phone 510-490-3024 fax

November 6, 2026

Western Hills Water District
9679 Copper Mountain Rd
Patterson, CA 95363

ATTENTION: Ron Demmers

REFERENCE: FIELD INSPECTION REPORT,
FILTER 1, 154 SQFT ACTIFLOW GRAVITY FILTER

Mr. Ron Demmers:

On November 6, 2026, after the media was removed by ERS crew, Nikolas Radonich from ERS Industrial Services Inc. performed a complete inspection of the underdrain system in filter 1. The filter underdrain system consists of individual plastic molded blocks assembled into runs to form the laterals. The laterals are then grouted in place and held down with stainless steel angles. Each molded block is factory assembled with a stainless-steel media retention plate held in place with stainless screws and rope sealant.

The following report includes observations, recommendations and photographs that document the conditions found from the underdrain inspection. If you have any questions regarding this information, how it was obtained or how to interpret it, please feel free to contact me.

Sincerely,

Nikolas Radonich
ERS Industrial Services, Inc.
2120 Warm Springs Ct.
510-770-0202 phone,
510-490-3024 fax

Observations

1. Prior to the start of work, after the water was drained 2 holes were noted on the media surface indicating possible media leaking into the underdrain system.
2. After media was removed, multiple underdrain blocks showed missing or loose screws on media retention plates
3. Multiple underdrain blocks showed gaskets blown out or missing between media retention plates and top of blocks.
4. Media retention plates showing bent ends from excessive back pressure from plugged media retention plates
5. Scouring of the wall coating system from failed endplate gasket.
6. Media retention plates were removed in 4 locations. Media was noted on top of block
7. Media retention plates show signs of plugging and micro fouling
8. Plastic block / media retention plate screw locations show cracking from age and fatigue
9. Bore Scope inspection was performed, and media was observed in the blocks and lateral runs.

Recommendations

1. Remove all existing underdrain from the filter and dispose of it at a landfill
2. Saw cut concrete floor and install new 12” stainless-steel header for lateral underdrain system
3. Continue preparations and coating system down to concrete floor behind existing underdrain system
4. Install new stainless-steel lateral underdrain system
5. Install new stainless-steel air scour system
6. Install new gravel bed design.

Photo Index

Photo 1: Filter media removal by vacuum

Photo 2: Media surface before removal

Photo 3: Bent end of media retention plate

Photo 4: Gasket Bulge

Photo 5: Media on top of block

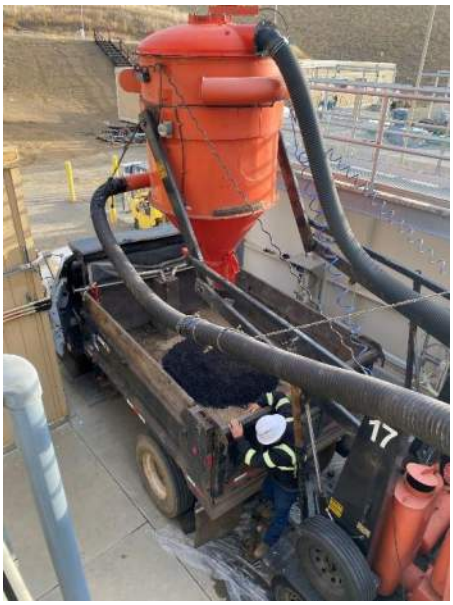
Photo 6: Losse screws, scouring of coatings

Photo 7: Bent end of media retention plate

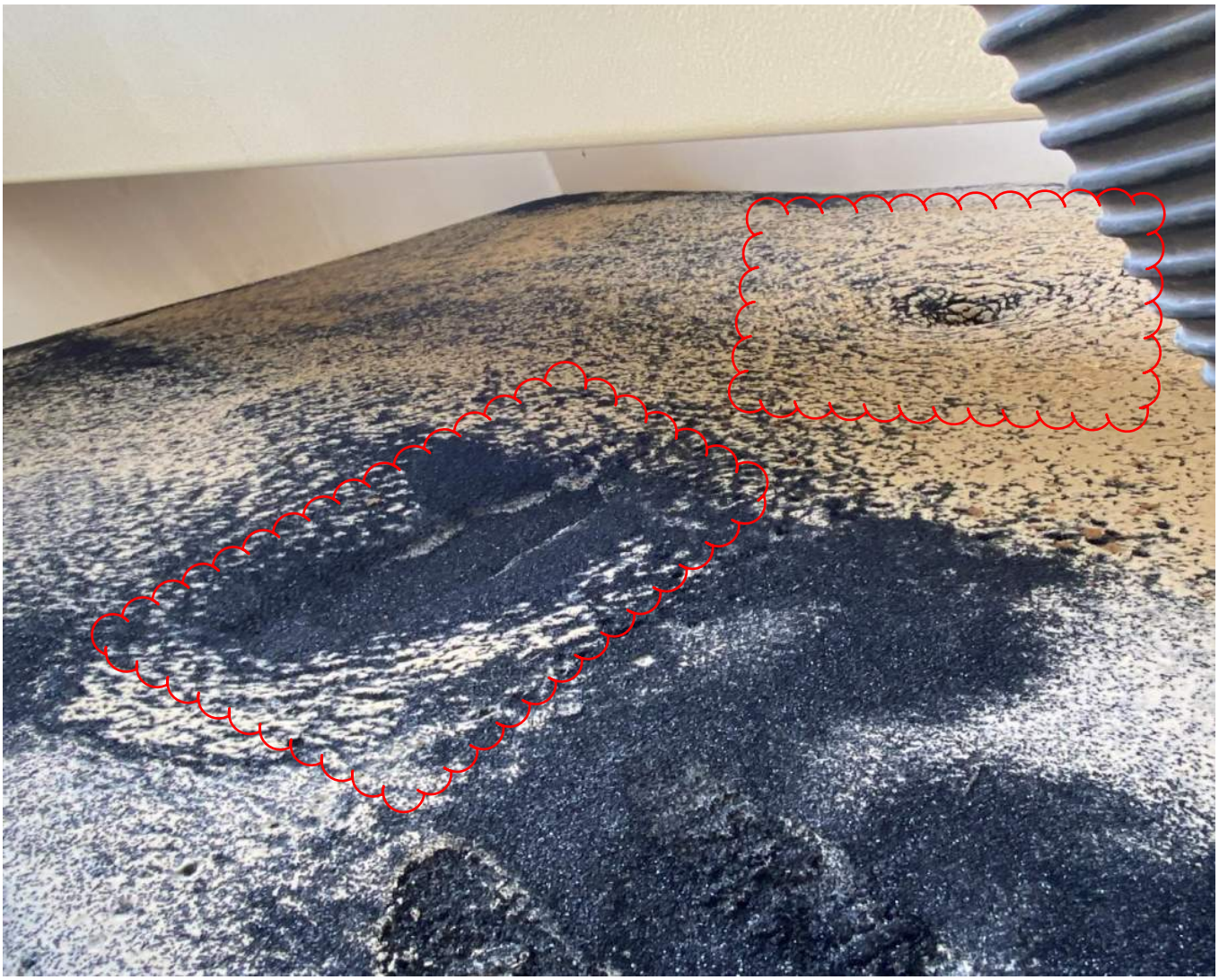
Photo 8: Cracked block/media retention plate screw locations

Photo 9: Borescope media in underdrain laterals

Photo 10: Borescope media in underdrain laterals



Removing Filter Media


Top of filter media depressions during drain down



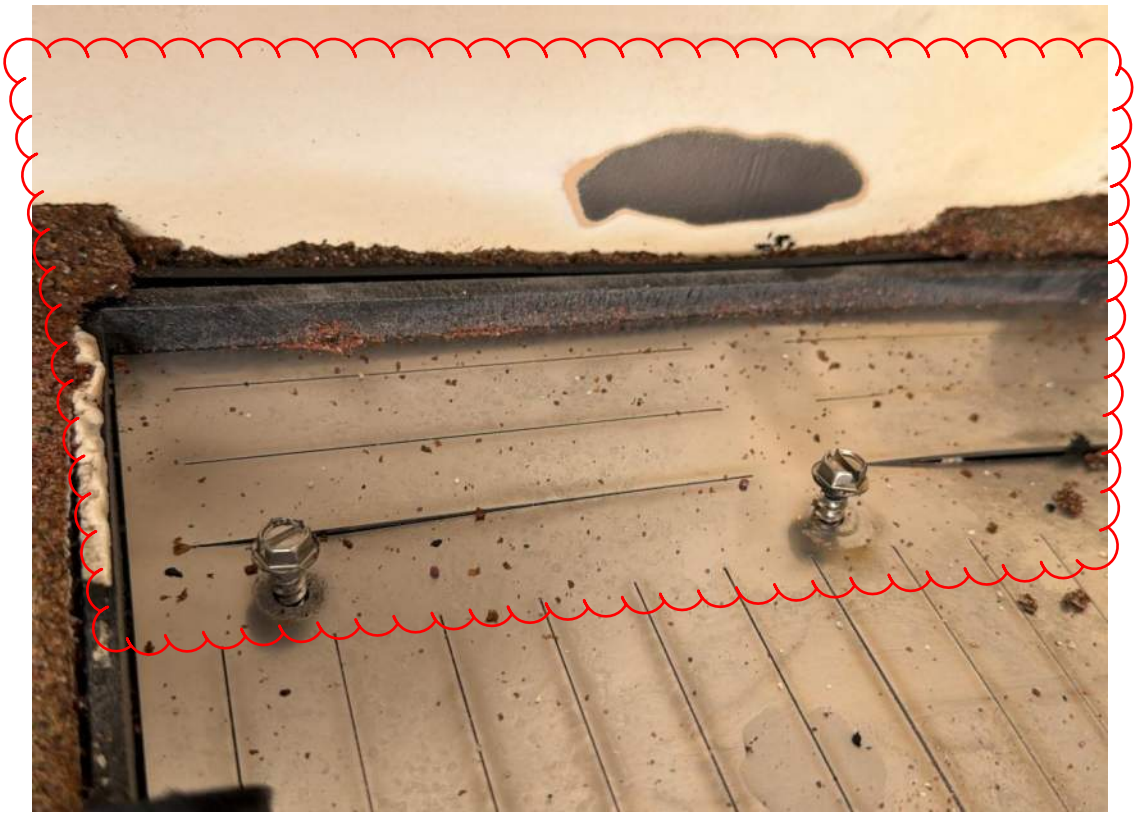
Bent end of media retainer plate. Gasket blown out.



Bulging Gasket



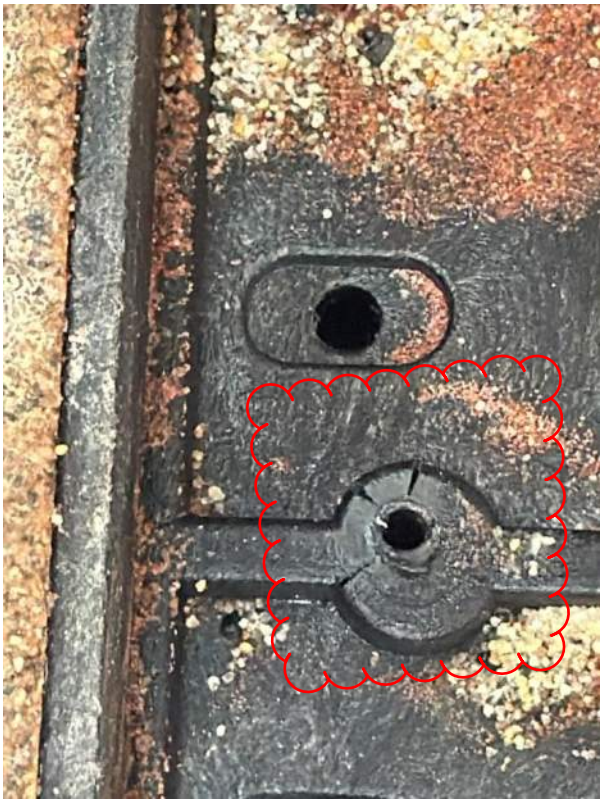
Media on top of block



Loose Screws, Bulged media retention plate, end cap seal missing. Scoured pain off wall during backwash.



Bent end of media retention plate from back pressure



Cracked plastic block/media retention plate screw location



Sand, Garnet and Anthracite in underdrains

Sand, Garnet and Anthracite in underdrains

