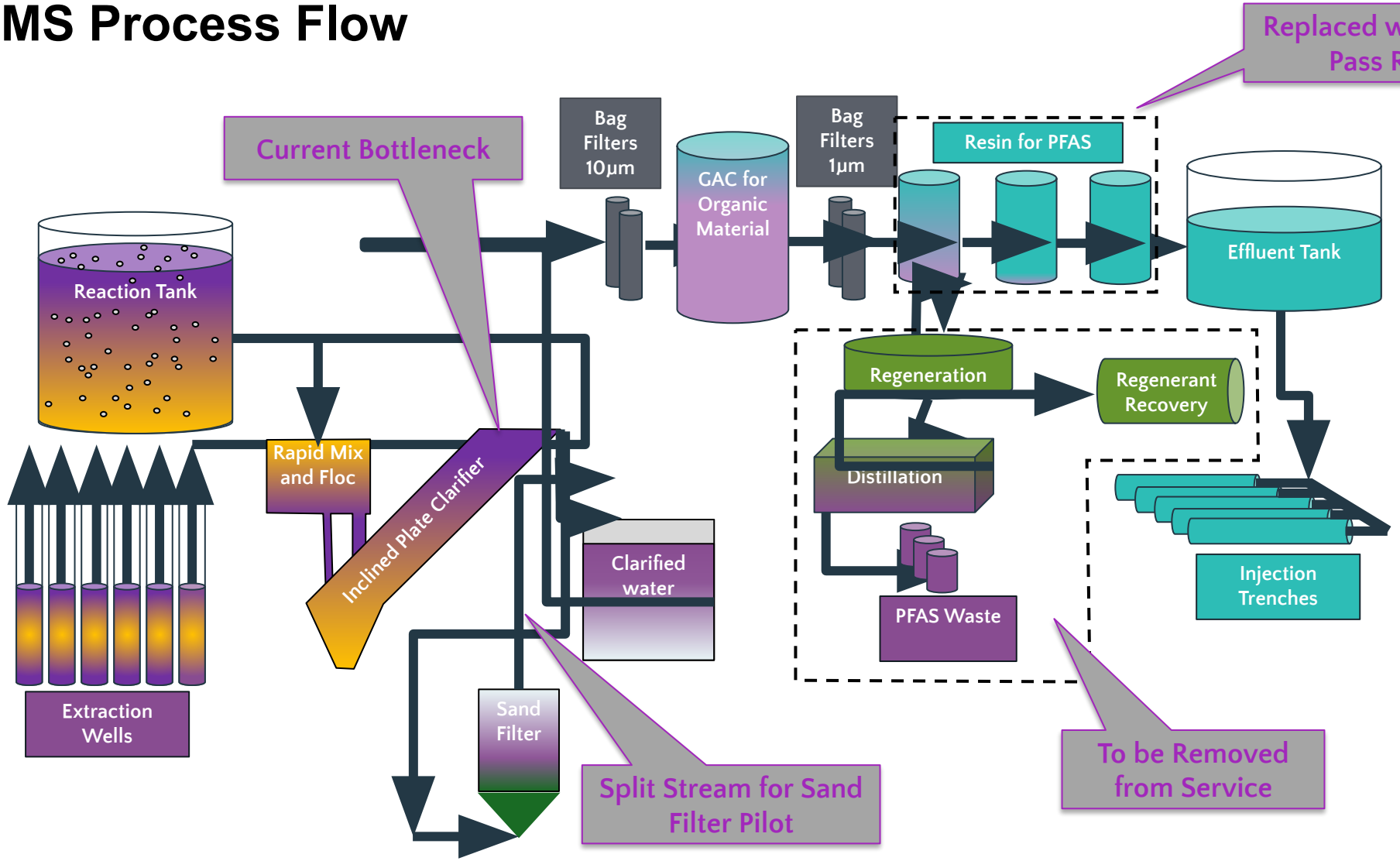
Site 8 IMS Status Update

Site 8 IMS Process Flow



Site 8 IMS Status Update

Site 8 IMS Optimization Challenges

- Iron/metals fouling continues to be the primary limiting factor for treatment capacity.
- Operators have increased cleaning frequency of well pumps and conveyance lines to maintain extraction rates and prevent plugging.
- Increasing iron loading from wells overwhelms the clarifier, causing spillover of solids, which blinds bag filters and causes the system to shut down.
    - Two solutions: larger clarifier, and post clarifier continuous filtration (sand filter)

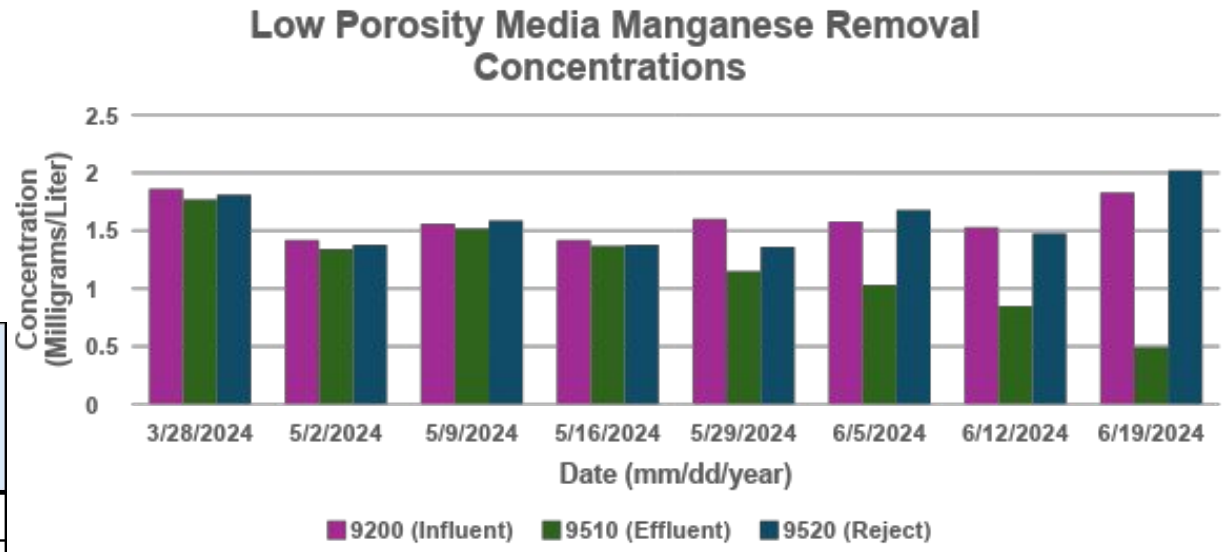
Site 8 IMS Status Update

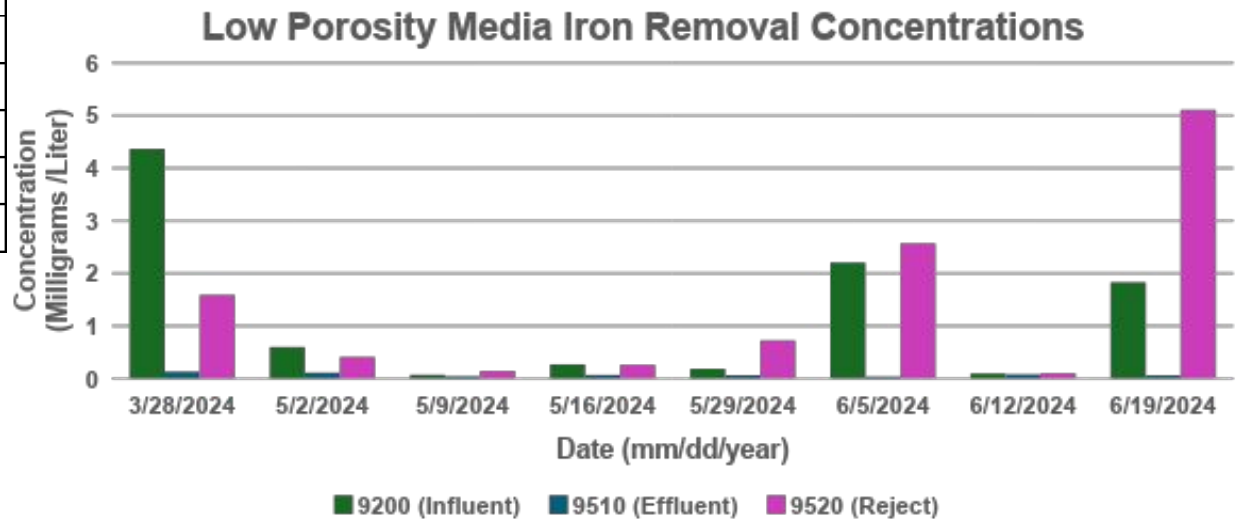
Sand Filter Pilot Test Results

- Results indicated removal of iron and manganese compounds

Date	Flow Rate (gpm)	Percent Removal of Iron	Percent Removal of Manganese
3/28/2024	NR	97%	5%
5/2/2024	7.5	82%	6%
5/9/2024	12	41%	3%
5/16/2024	11.5	75%	4%
5/29/2024	9.3	66%	28%
6/5/2024*	9.8	98%	35%
6/12/2024	12	17%	45%
6/19/2024*	11.8	97%	73%

*Denotes upset (non-typical) conditions testing dates.

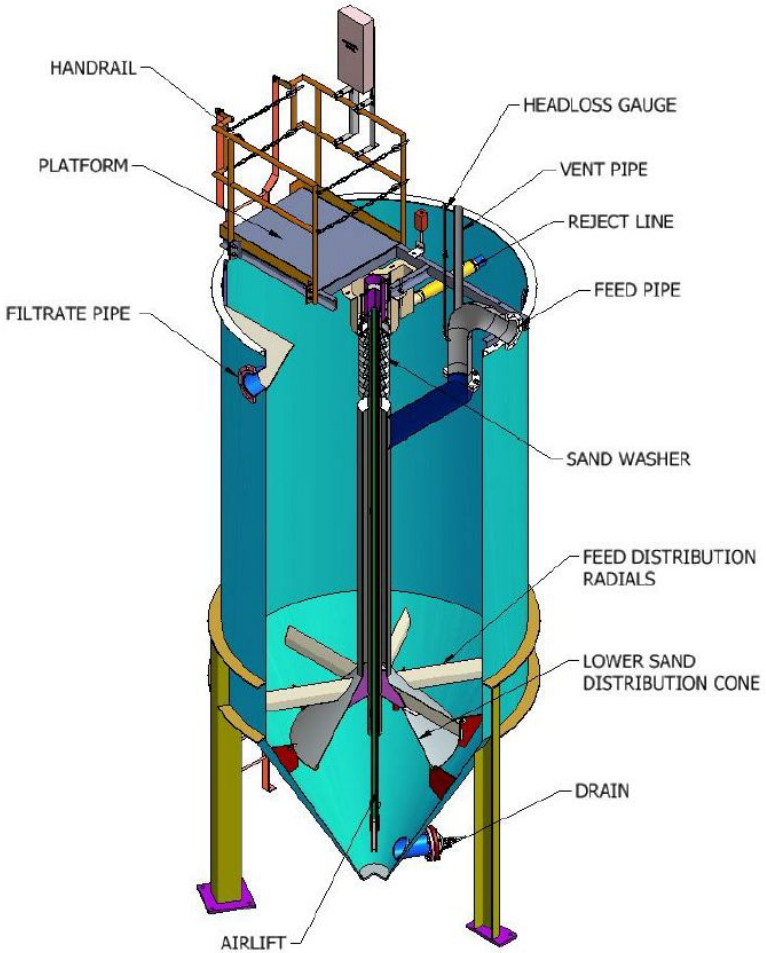




Site 8 IMS Status Update

Proposed Solutions Under Evaluation

- Upsize clarifier to increase flow and solids handling capabilities
  - Includes upsizing of influent aeration tank, chemical feed pumps, and clarified water tank.
- Double carbon treatment capacity to reduce backwash frequency
- Install post-clarifier sand filter for treatment of process water to minimize risk of bag filter fouling.
- Upsize sludge filter press and sludge holding tank(s), including sludge transfer pumps, to maximize sludge processing capabilities.



Site 8 IMS Status Update

Upgrade Timeline

- Selective equipment removal planned for fall 2024
  - Includes resin regeneration equipment, all methanol solutions, and dry chemical fire suppression system
- Building modifications planned for winter 2024
  - Includes expansion of concrete equipment pads for larger equipment (as necessary) and electrical upgrades in north room.
- Upgrade implementation planned for spring 2025.