

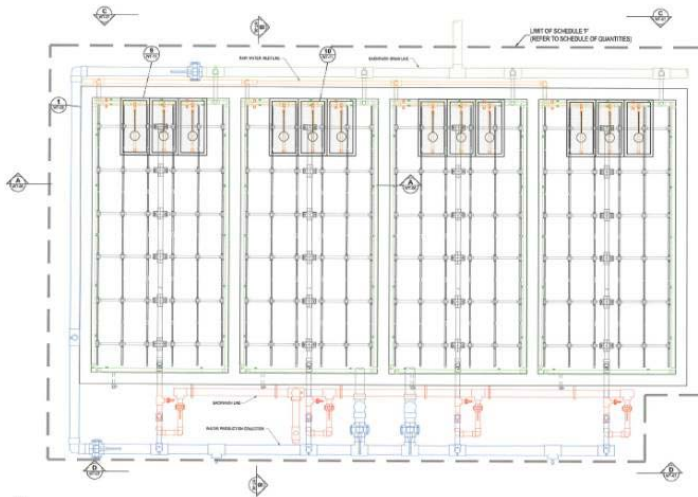
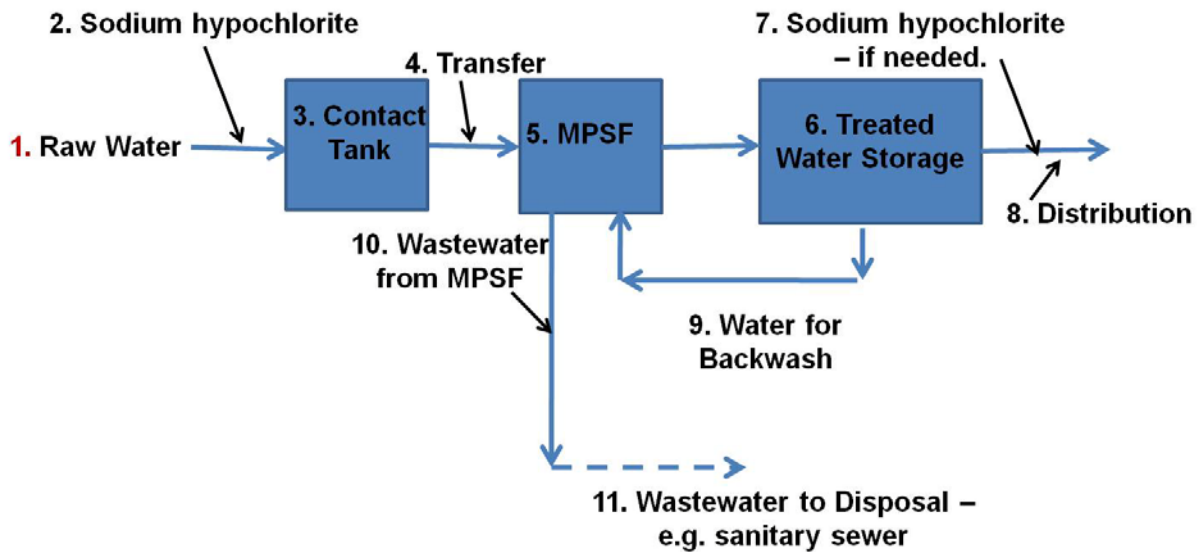
Hamlet of Exshaw Water Treatment Plant MD of Bighorn, Alberta, Canada Iron, Manganese and H₂S Removal Using MPSF Technology



Design constraints and objectives:

- Groundwater supply not under direct influence of surface water.
- Iron above 1.0 mg/L.
- Manganese above 0.15 mg/L.
- Hydrogen sulfide (significant) and presence of sulfate reducing bacteria.
- Required treatment capacity of 1,200 m³/day or 50,000 litres per hour. Expandable to 100,000 litres per hour.
- Minimum chemical requirements.
- Minimum level of automation.
- Minimum complexity – Operator Level 1 if possible.
- Backwash water to be disposed of in town lagoon through existing sanitary sewer.

Process flow diagram for Fe and Mn removal.



- 4 (3 m x 5 m) cells
- Each cell can treat a maximum of 15,000 L/h. (Loading of 1.0 m³/m²/h)

