

SCWP Facility Plan Update

Work Session Wastewater Facility Plan Amendment Update

May 4, 2026

Sandy Clean Waters Program (SCWP)

City Council Meeting: Work Session

AGENDA

1. City of Sandy Current Status
2. Long-Term Discharge Alternatives
3. Recommended Approach
4. Membrane Bioreactor
5. Groundwater Discharge

2025 Analysis

- Facility Plan Amendment initially recommended a Regional Treatment approach, sending flow to Gresham for treatment and discharge
 - While at the time slightly more expensive than other options, this approach had the greatest schedule certainty
 - This alternative has the advantage of getting Sandy out of the wastewater business, but relies on partnership and agreements with Gresham to support Sandy's future growth
- A Conceptual Design Report for conveyance from Sandy to Gresham revealed additional complexity and cost, making costs higher than previously estimated
- Discussions with Gresham were positive, however the cities have not agreed upon a connection charge

Bottom Line: Neither Sandy River or Gresham Alternatives are financially feasible

Current Situation

- At the direction of the Legislature, Oregon DEQ is now investigating opportunities to promote increased effluent reuse
- New Groundwater Recharge Alternative for Sandy:
 - Direct injection to groundwater, potentially augmenting depleting groundwater supply
 - Ideal location = near Iseli Nursery
 - Provides a foundation for a variety of discharge options
 - Wet-season Tickle Creek discharge with highest effluent quality
 - Continued reuse at Iseli Nursery
 - Discharge to groundwater during times when Tickle Creek discharge prohibited and reuse demand not available

Treatment and Discharge Alternatives

Jarl Road WWTP Expansion + Sandy River Discharge



Time to Construct:
6-8 Years

Cost: \$165 M

Convey to Gresham WWTP for Treatment and Discharge



Time to Construct:
4 Years

Cost: \$184 – \$195 M

Jarl Road WWTP Expansion + Groundwater Discharge



Time to Construct:
4-7 Years

Cost: \$134 – \$147 M

Recommended Approach

Jarl Road WWTP Expansion + Groundwater Discharge



Time to Construct:
4-7 Years

Cost: \$134 – \$147 M

Advantages:

- Lowest cost based on shortest potential effluent conveyance route
- Can be phased so initial WWTP expansion is concurrent with discharge permitting & design
- Retains local reuse partner

Risks:

- Has not been permitted in Oregon yet
- Effluent quality determined by aquifer characteristics; treatment requirements uncertain

Overview of Recommended Alternative

Phased WWTP Expansion

Phase 1: MBR Expansion

- Headworks Upgrade
- New Membrane Bioreactor (MBR) with complete nitrogen removal for groundwater discharge
- Biosolids Dewatering Upgrade
- Biosolids Storage
- Electrical, Instrumentation, Controls, and Site Utilities

Phase 2: Effluent Polishing

- Additional treatment required to meet final groundwater discharge standards
- Two treatment options considered to estimate range of cost

Effluent Polishing Options

Granular Activated Carbon



Treatment units containing activated carbon to remove pollutants that pass through membrane filters in MBR

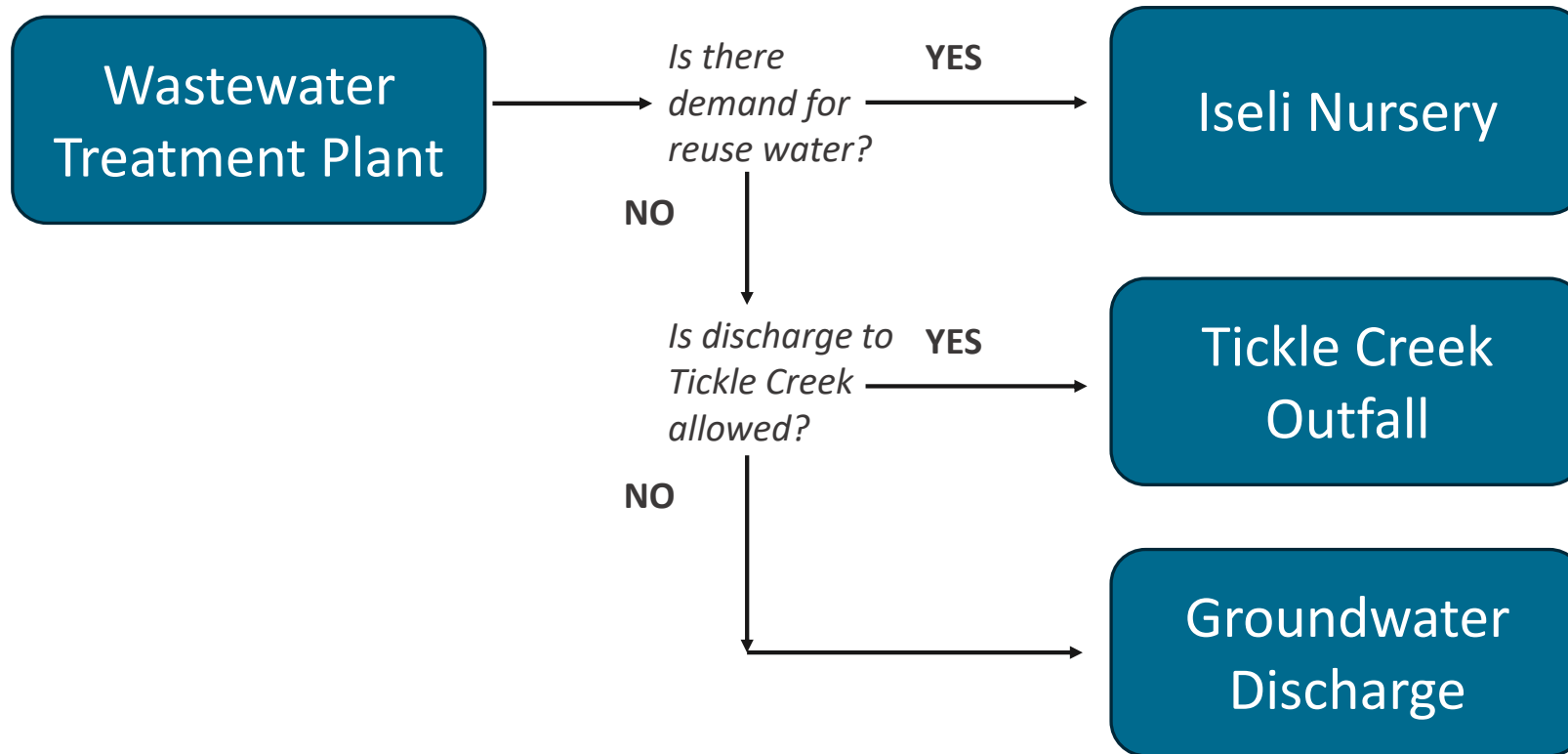
Reverse Osmosis



Purification process using extremely fine filters that remove nearly all contaminants but produces large volume of waste

Overview of Groundwater Discharge

Proposed Effluent Discharge Concept

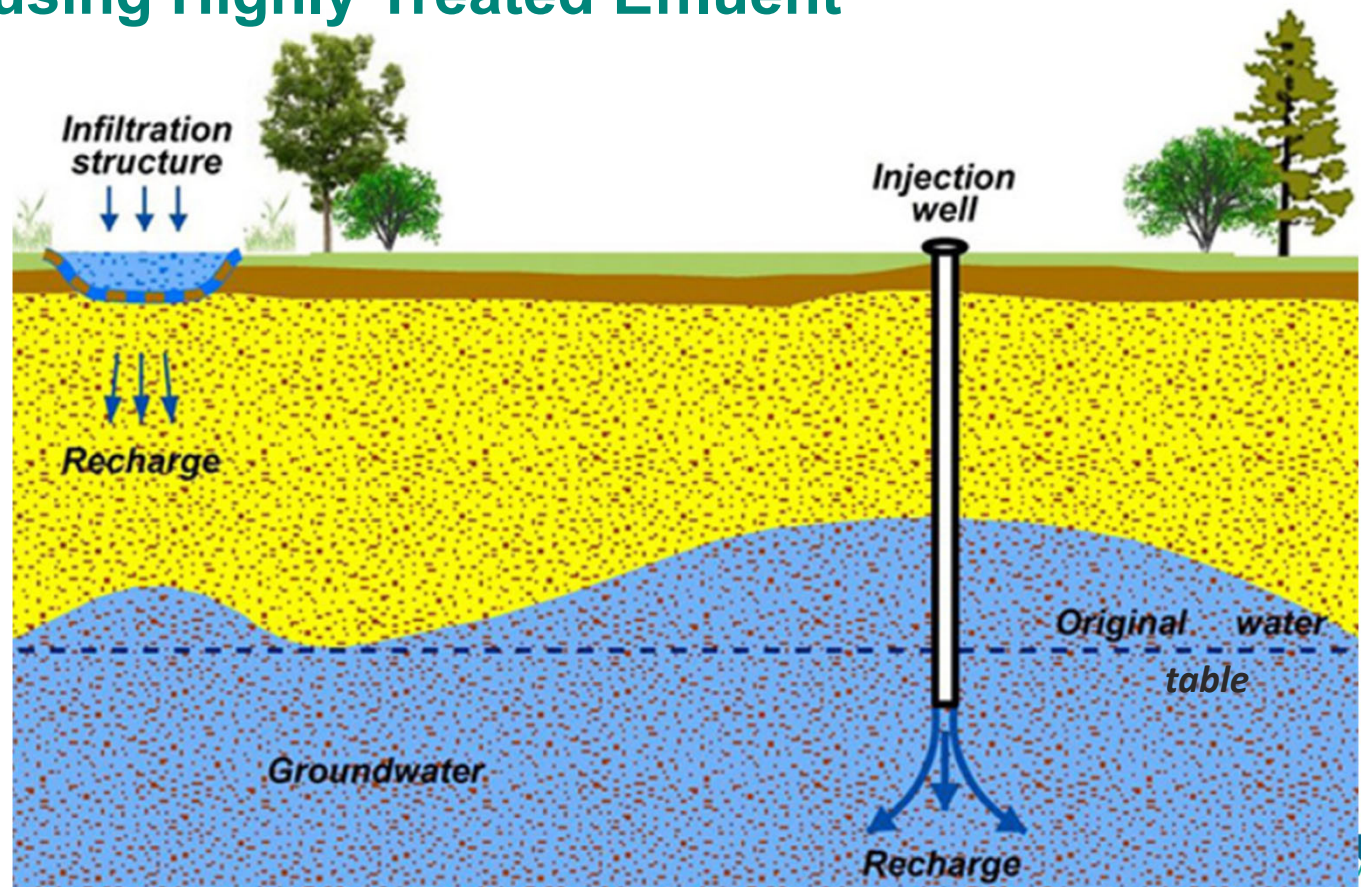


Groundwater Discharge Concept

Aquifer Recharge using Highly Treated Effluent

Two methods of aquifer recharge:

- Infiltration – not suitable due to soil characteristics
- Direct injection – proposed for Sandy



Source: Western Australia Department of Water and Environmental Regulation

Thank you!

