**Status of Water Supply Options Adopted in the Water Supply Feasibility Study (WSFS)**

**RESULTS**

**EVALUATION CRITERIA**

<table>
<thead>
<tr>
<th>Source Options</th>
<th>20' Scoggins Raise</th>
<th>40' Scoggins Raise</th>
<th>40' Scoggins Raise + Sauvie Island Tunnel</th>
<th>45' Scoggins Raise + Raw Water Pipeline Pump-Back</th>
<th>Simms Dam</th>
<th>Willamette Irrigation Exchange Pipeline</th>
<th>Willamette WTP + 25' Scoggins Raise + Raw Water Pipeline Pump-Back</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Yield at 90% reliability (AF)</strong> (1)</td>
<td>6,000</td>
<td>10,000</td>
<td>26,000</td>
<td>53,000</td>
<td>11,000</td>
<td>19,000</td>
<td>53,000</td>
</tr>
<tr>
<td><strong>Reliability at 2050 demands (53,000 AF)</strong> (2)</td>
<td>Insufficient yield to meet 2050 demand (3)</td>
<td>18%</td>
<td>50%</td>
<td>93%</td>
<td>25%</td>
<td>Insufficient yield to meet 2050 demand (4)</td>
<td>95% (est.)</td>
</tr>
<tr>
<td><strong>Environmental Impacts</strong></td>
<td>Proportional to 40' raise alone.</td>
<td>Most impacts to federally-owned property around reservoir. Impacts private property in some locations. Provides benefits to water quality of Tualatin River. Will require mitigation for wetlands and habitats.</td>
<td>Same as 40' raise alone, but additional impacts to Tualatin River and fisheries due to water diversion during water demand periods. Will require mitigation for wetlands and habitat.</td>
<td>Same as 40' raise alone, but additional impacts to lower Tualatin River from water demand periods. Will require mitigation for wetlands and habitat.</td>
<td>Higher environmental impacts compared to 40' Scoggins raise, inundates park access road and entrance. Difficult access roadway construction. Will require mitigation for wetlands and habitat.</td>
<td>Assumed lower environmental impacts if the 23-mile, 54-inch pipeline can be tunneled under multiple stream crossings and sensitive areas.</td>
<td>Impacts associated with expansion of existing treatment plant have been addressed in previous permits. New treated water transmission lines would be required. Impacts around Scoggins reservoir are proportional to 40' raise, with less private property impact. Additional impacts to lower Tualatin River from water demand periods for pump-back. Potential water quality impact to Hagg Lake (currently under study).</td>
</tr>
</tbody>
</table>

**SOURCE OPTIONS**

- **Capital cost ($ million)**: 101, 134, 174, 200, 200, 117-138 (5)
- **Annual O&M cost ($Million/yr)**: 0.3, 0.3, 0.4, 0.9, 0.3, 0.4
- **Net Present Value Unit cost ($/AF) over 50 years**: 21,500, 14,100, 7,000, 5,400, 20,600, 6,300

**ADDITIONAL CRITERIA**

- **Cost allocation**: Assumes costs can be allocated fairly for all options
- **Legal/ regulatory feasibility**: Appears feasible for all dam options
- **Emergency reliability**: All options vulnerable to earthquake, natural disasters
- **Recreation**: Full replacement of affected facilities included in cost
- **Property impacts**: Bigger dam options have more impact
- **Efficiency**: Equivalent for all options
- **Institutional/ financial feasibility**: Appears feasible for all dam options
- **Water quality (delivered)**: Acceptable for all options
- **Flood control**: No additional
- **Timeliness**: Dam construction has longer timeframe than pipeline option
- **Security**: Equivalent for all dam options

**IS THE OPTION PROPOSED FOR DETAILED STUDY UNDER THE EIS?**

- NO
- YES

**Reasons**

- Insufficient yield, meets portion of demand target.
- Insufficient yield, meets portion of demand target. Low reliability at 2050.
- Insufficient yield, meets portion of demand target. Low reliability at 2050. Meets projected demands at reliability > 90%.
- Insufficient yield, meets portion of demand target. Low reliability at 2500. Would need to be combined with Tunnel (450M) or pump-back (45M) to meet yield and reliability targets.
- Meets portion of demand target. Would need to be combined with dam raise. Ability to gain new water right is uncertain. TVID opposed
- Meets projected demands at reliability > 90%

**GLOSARRY**

- **AF**: Acre Foot
- **ASR**: Aquifer Storage and Recovery
- **EIS**: Environmental Impact Statement
- **GPM**: Operations & Maintenance
- **TAF**: Thousand Acre Feet
- **TVID**: Tualatin Valley Irrigation District