

# Cascade Future Water Supply Options

**Bellevue Staff Analysis and Recommendations**

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*Utilities Department*

November 8, 2021



# Information Only

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Bellevue staff analysis and recommendations on:

- Cascade Water Alliance (Cascade) future water supply options
- Establishment of Cascade Water Supply Development Fund (WSDF)



# Agenda

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1. Background
2. Cascade's future water supply options and costs
3. Regional water supply/demand projections
4. Staff analysis and recommendations



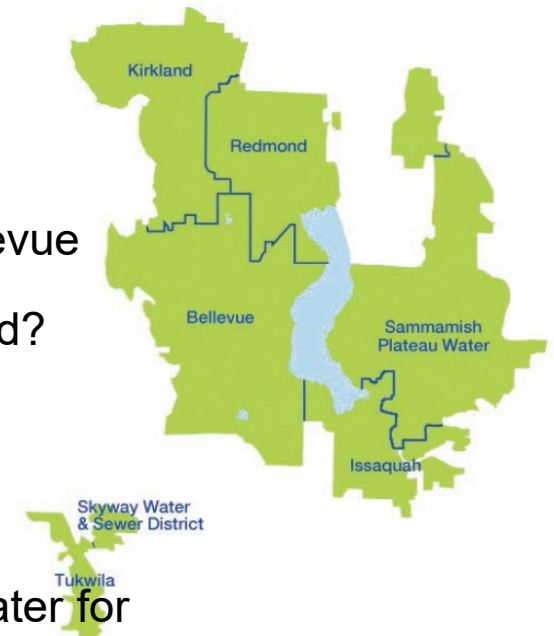
# Background

## 9/27 Cascade briefing:

- Future water supply options
- WSDF

## Council requested Bellevue staff:

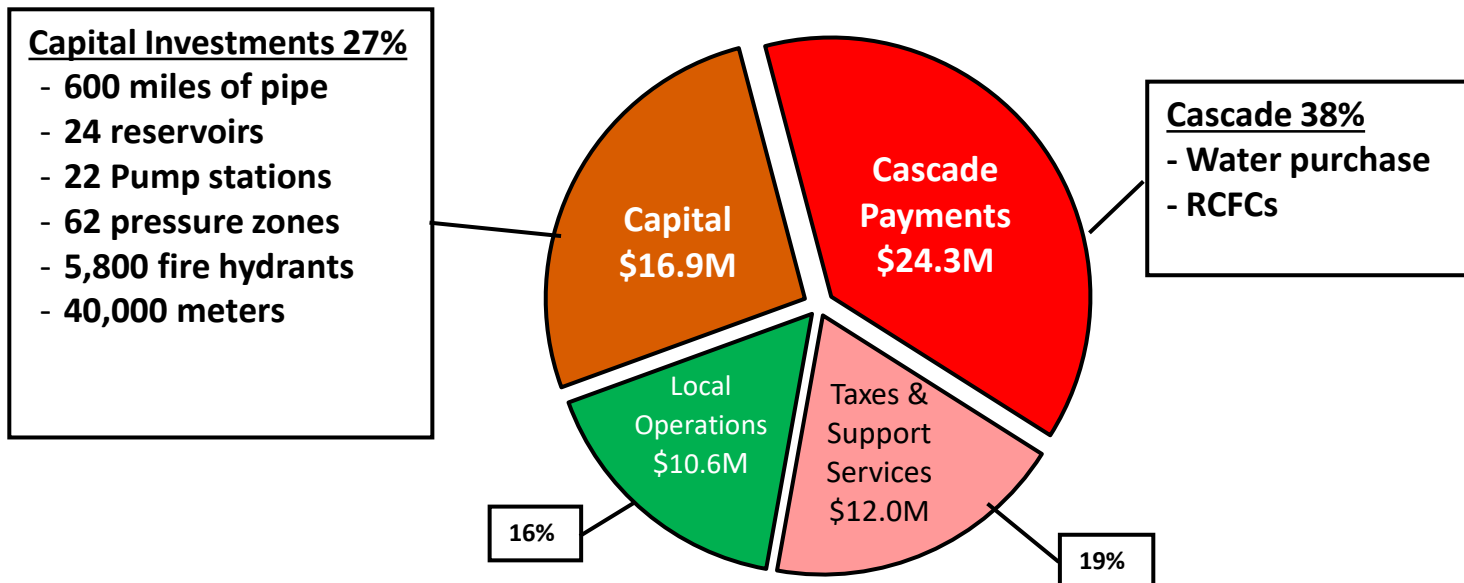
- Address questions
  - Why are Bellevue water rates high?
  - What are the supply options and impacts on Bellevue ratepayers?
  - Why was Seattle purveyor contract option rejected?
  - Is there sufficient regional water supply?
  - Have climate change effects been considered?
- Provide analysis and recommendation
  - Going forward, what is the best way to provide water for the future at the best rates?



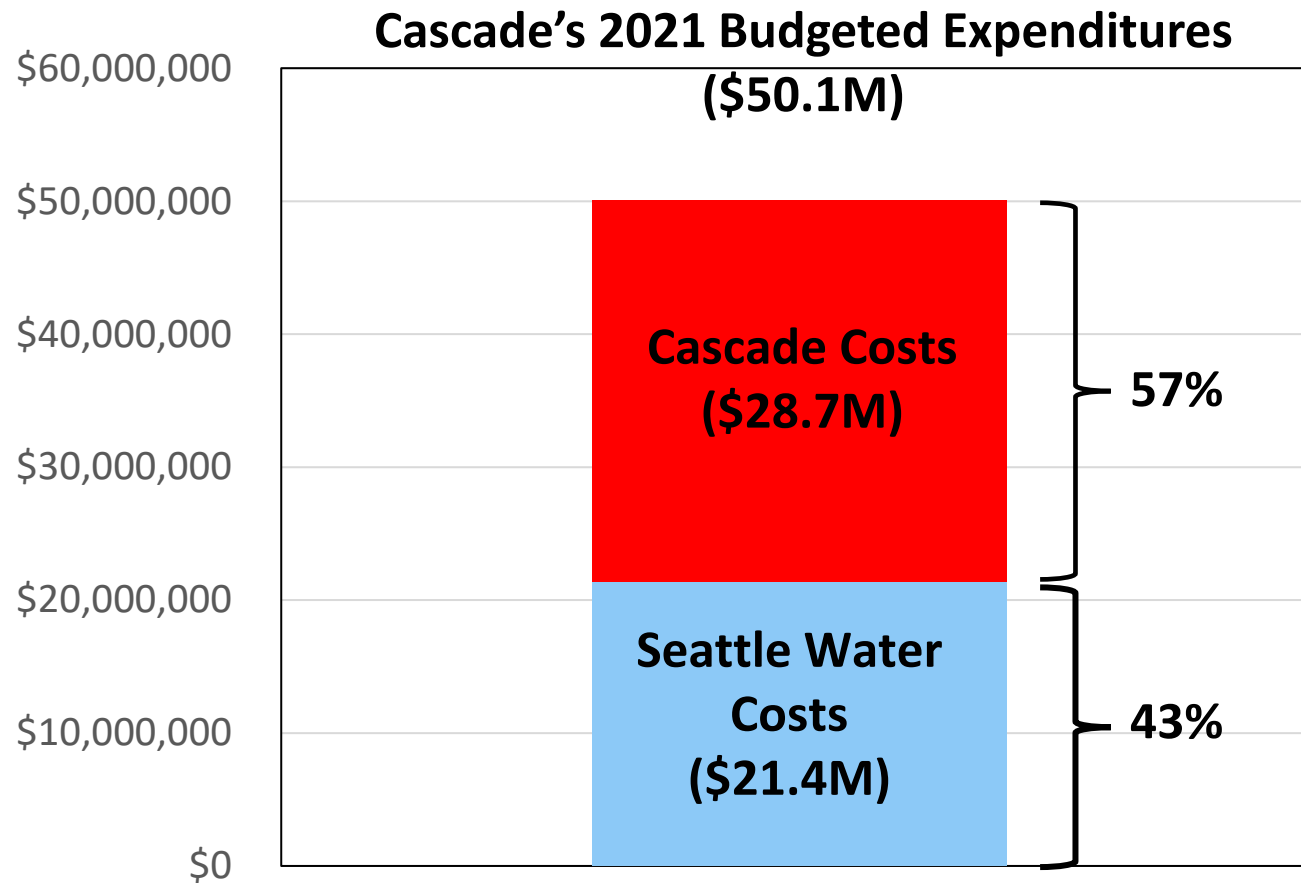
# Why are water rates high?

- Two main rate drivers
- Investments in Bellevue aging infrastructure
  - Cascade water supply costs

## 2021 Bellevue Water Utility Budget \$63.8M



# Why are water rates high? (cont.)



# Cascade Water Supply Options and Costs (\$billions)

Option	Description	Lake Tapps Phase 1 project cost* (current \$)	Lake Tapps Phase 1 project costs* (inflated \$)	WSDF accrual	Bond funding
1	<ul style="list-style-type: none"> <li>No extension/new contract</li> <li>Develop Lake Tapps Ph 1 2042</li> </ul>	\$0.9B	\$1.5B	\$0.4B	\$1.1B
<b>Options being pursued by Cascade</b>					
2	<ul style="list-style-type: none"> <li>15-year Seattle extension to 2055</li> <li>Develop Lake Tapps Ph 1 2055</li> </ul>	\$0.9B	\$2.4B	\$1.2B	\$1.2B
3	<ul style="list-style-type: none"> <li>20-year Tacoma contract to 2059</li> <li>Develop Lake Tapps Ph 1 2059</li> </ul>	\$0.9B	\$2.7B	\$1.1B	\$1.6B
4	<ul style="list-style-type: none"> <li>20-year Tacoma contract to 2059 w/Seattle wheeling</li> <li>Develop Lake Tapps Ph 1 2059</li> </ul>	\$0.9B	\$3.0B	\$1.2B	\$1.8B
<b>Options considered but rejected by Cascade Board</b>					
5	<ul style="list-style-type: none"> <li>20-year Everett contract to 2059</li> <li>Develop Lake Tapps Ph 1 2059</li> </ul>	Option not fully evaluated.			
6	<ul style="list-style-type: none"> <li>Seattle purveyor contract</li> <li>Lake Tapps development not needed</li> </ul>	Option not fully evaluated.			

Source: Cascade Water Alliance

**\*Bellevue pays half of all project costs.**

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# Infrastructure Needed to Develop Lake Tapps





# Original Cascade Members

Source: Cascade Water Alliance



City of Bellevue



# Current Cascade Members

Source: Cascade Water Alliance



City of Bellevue



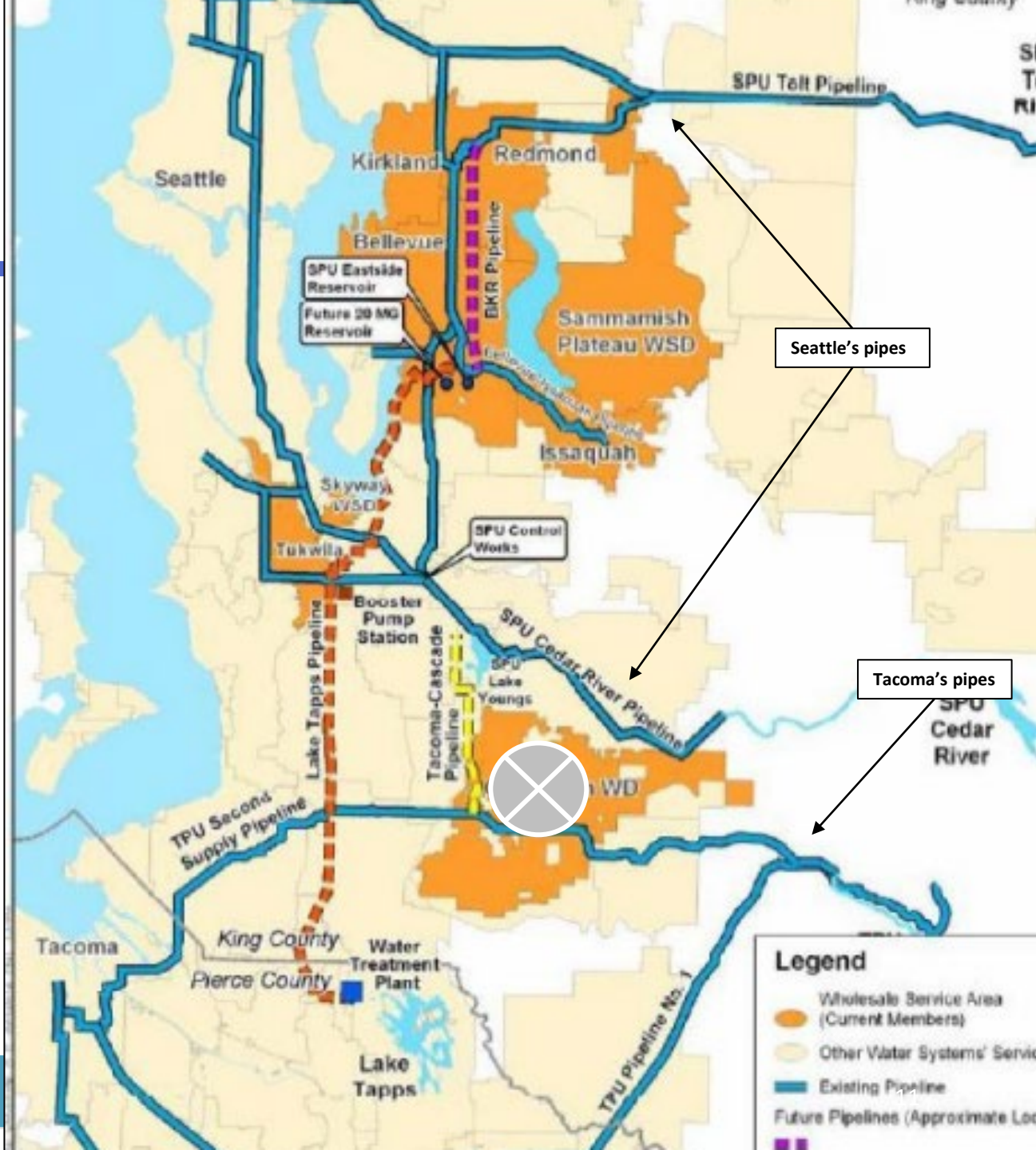


# Existing regional water transmission infrastructure

Source: Cascade Water Alliance



City of Bellevue



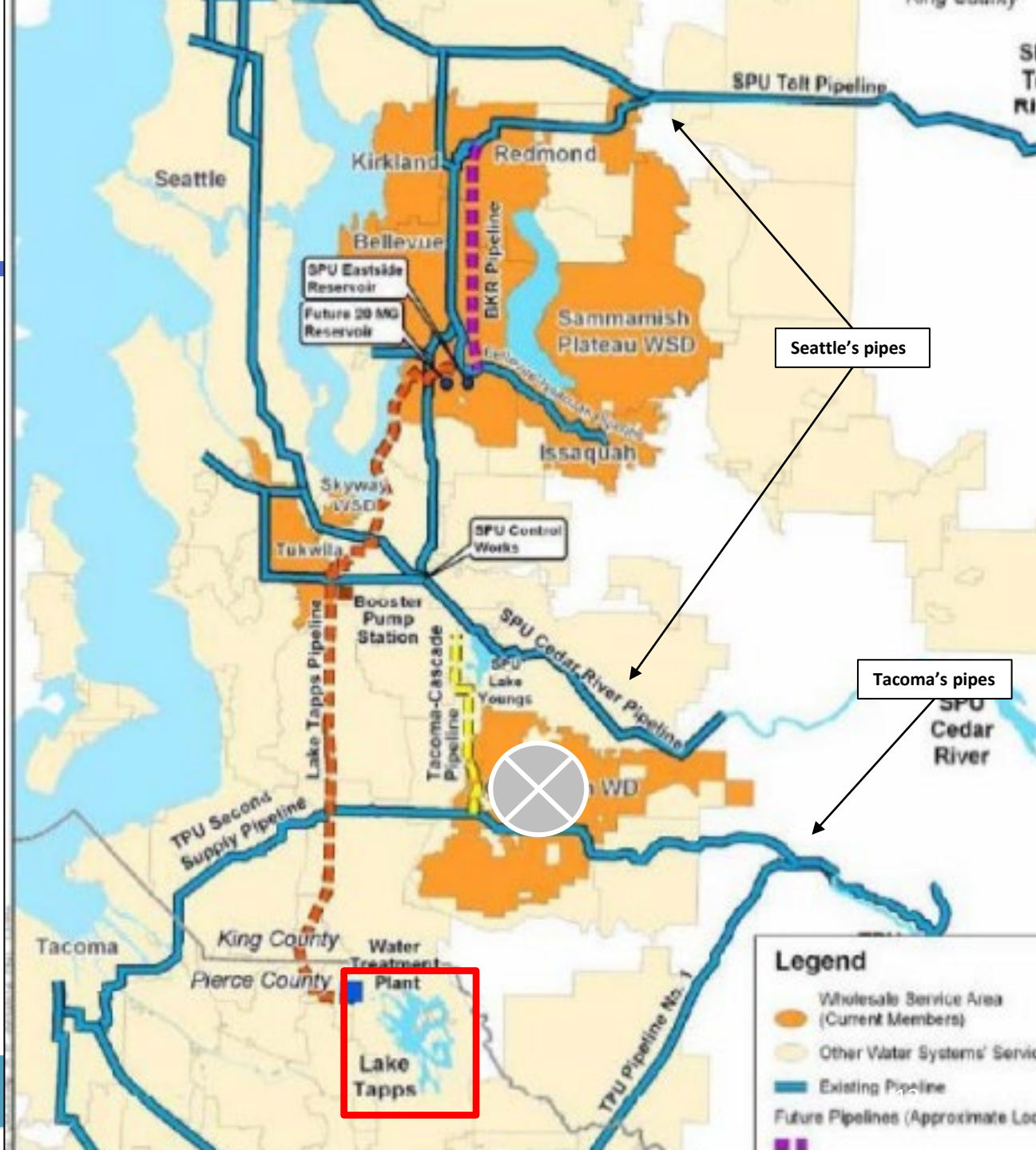
# Proposed Lake Tapps Water Supply System

- 87 MGD treatment plant
- 30 miles of 66-inch pipeline
- pump station
- 20 MG reservoir
- transmission pipe between South Bellevue and Kirkland

Source: Cascade Water Alliance



City of Bellevue



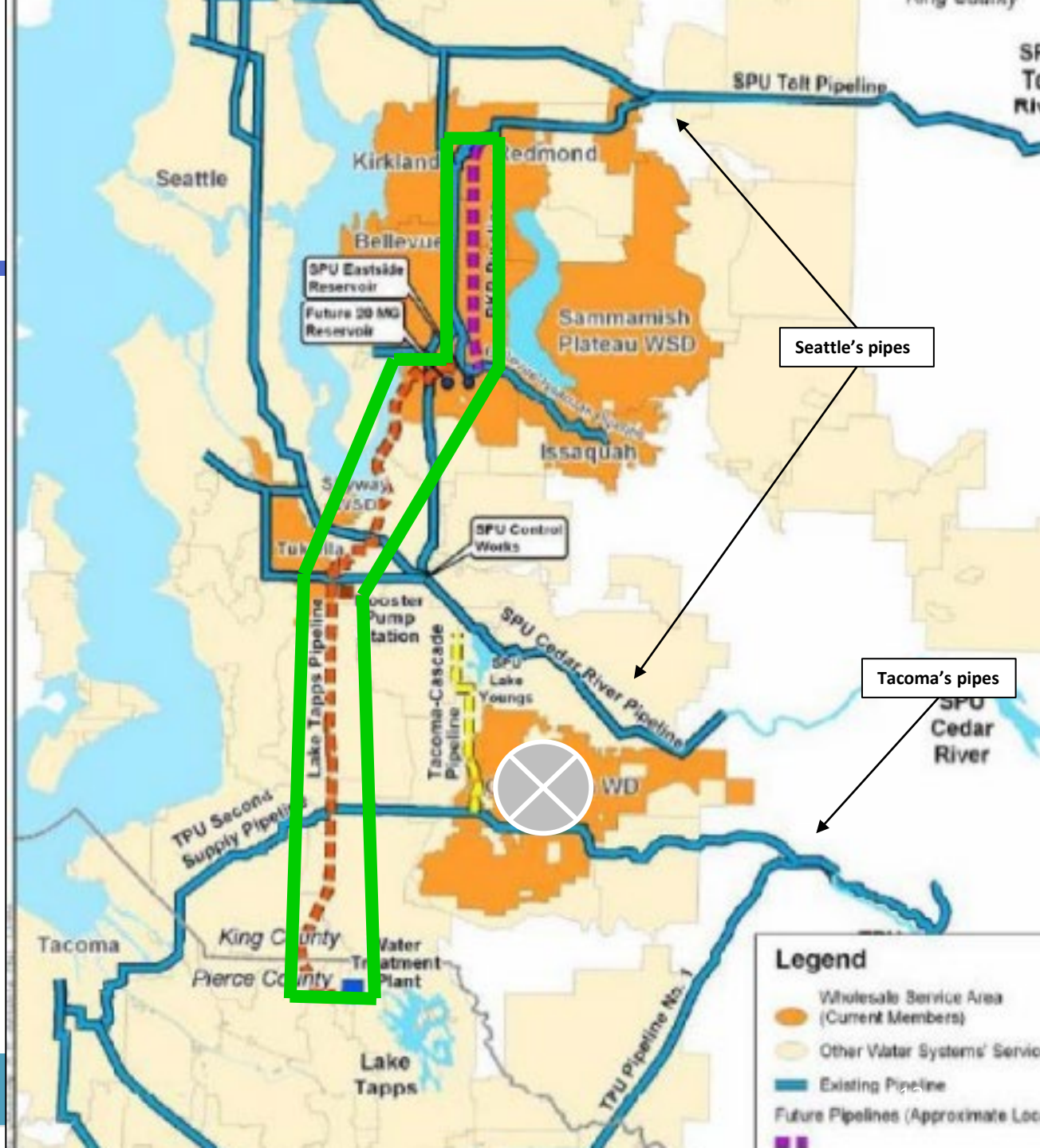


# Potential Transmission Pipeline Corridor A

Source: Cascade Water Alliance



City of Bellevue



# Potential Transmission Pipeline Corridor B

Source: Cascade Water Alliance



City of Bellevue





# Potential Transmission Pipeline Corridor C

Source: Cascade Water Alliance



City of Bellevue



# Lake Tapps Supply Project

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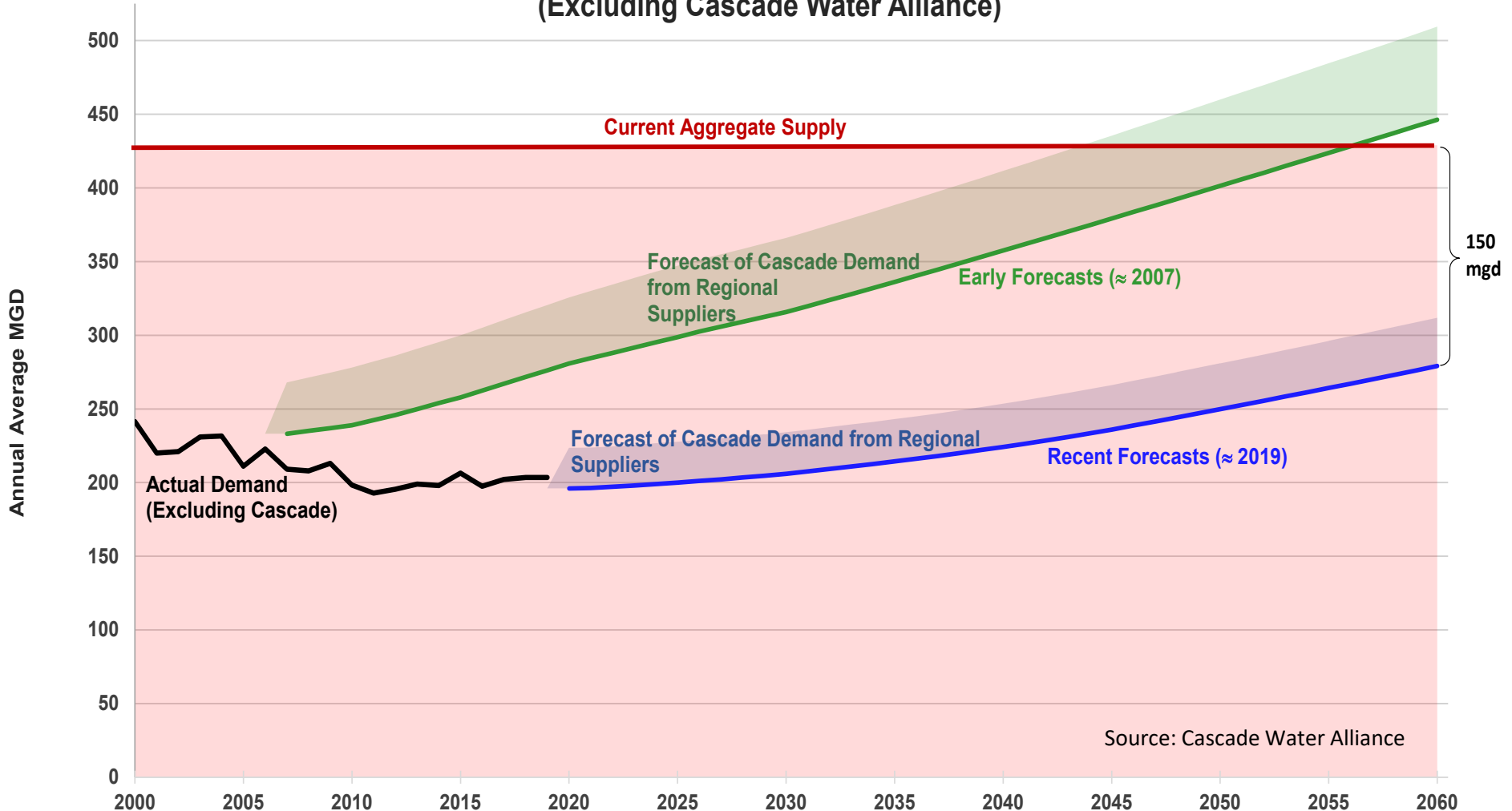
- Treatment plant
  - Cost and phasing of construction
  - Level of treatment required
- Constructability of pipeline corridor routes
  - Permitting
  - Environmental mitigation/impacts
  - Property/easement acquisition
- Acquisition/siting of reservoir in Bellevue
- Construction of transmission line through Bellevue
- Potential reliance on use/purchase of Seattle's infrastructure





# Ample Regional Water Supply to Meet Future Demand

Seattle-Tacoma-Everett Aggregate Supply and Projected Demand  
(Excluding Cascade Water Alliance)



# Cascade Has Sufficient Supply Through 2040

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## Supply

- Cascade's current contracts provide 41.3 MGD until 2040
  - 33.3 MGD from Seattle
  - 8 MGD from Tacoma

## Demand

- Previous demand forecasts too high
- Currently using 65% (27 MGD) of total purchased water
- Despite unprecedented growth, Cascade's demand has flattened over past decade

# Staff Analysis

- Premature to establish WSDF
  - Cascade reports ample regional water supply for the foreseeable future
  - Uncertainty of Lake Tapps as water supply source - if and when
  - No down-side to delaying until contract negotiations with Seattle, Tacoma, and/or Everett are complete (~2 years)
  - Avoids setting aside funds that may not be needed



# Staff Analysis (cont)

- Impact on current customers
  - Already paying \$10 million annually in debt service for Lake Tapps – (retired by 2038)
  - Paying for water supply from Seattle



# Staff Analysis (cont)

- What happens to WSDF reserves if Lake Tapps is never developed?
  - By 2055, about \$1.2 billion will accumulate in WSDF
    - About \$600 million would be paid by Bellevue customers
  - Bellevue will not control these funds



# Staff Recommendation

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- Negotiate longer term contract (30+ years) with Seattle, Tacoma and/or Everett before considering developing Lake Tapps
- Wait to establish the WSDF until contract negotiations are complete



# Water Supply Options and Costs (\$billions)

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<b>Options being pursued by Cascade</b>					
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<b>Alternatives proposed by Bellevue staff</b>					
A	<ul style="list-style-type: none"> <li>Explore long-term (30+ year) contract with Seattle/Tacoma/Everett before developing Lake Tapps</li> </ul>	Needs evaluation.			

**\*Bellevue pays half of all project costs.**



# Questions?

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