

A NEW SUPPLY FOR WASHINGTON COUNTY

Hillsboro's &
TVWD's Selection
Of A New Water
Supply

PNWS-AWWA Annual
Conference
May 7, 2014



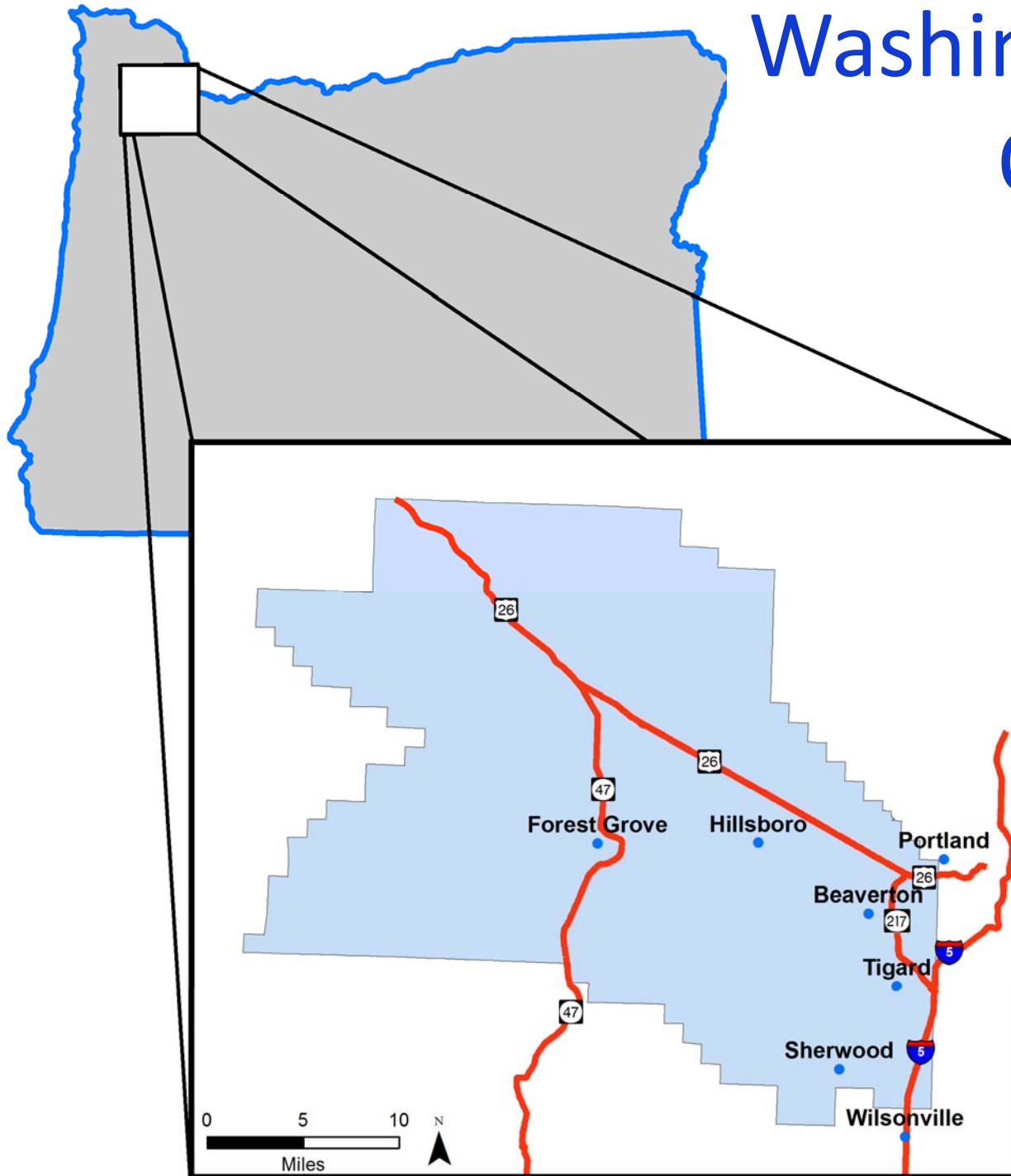
Tualatin Valley Water District



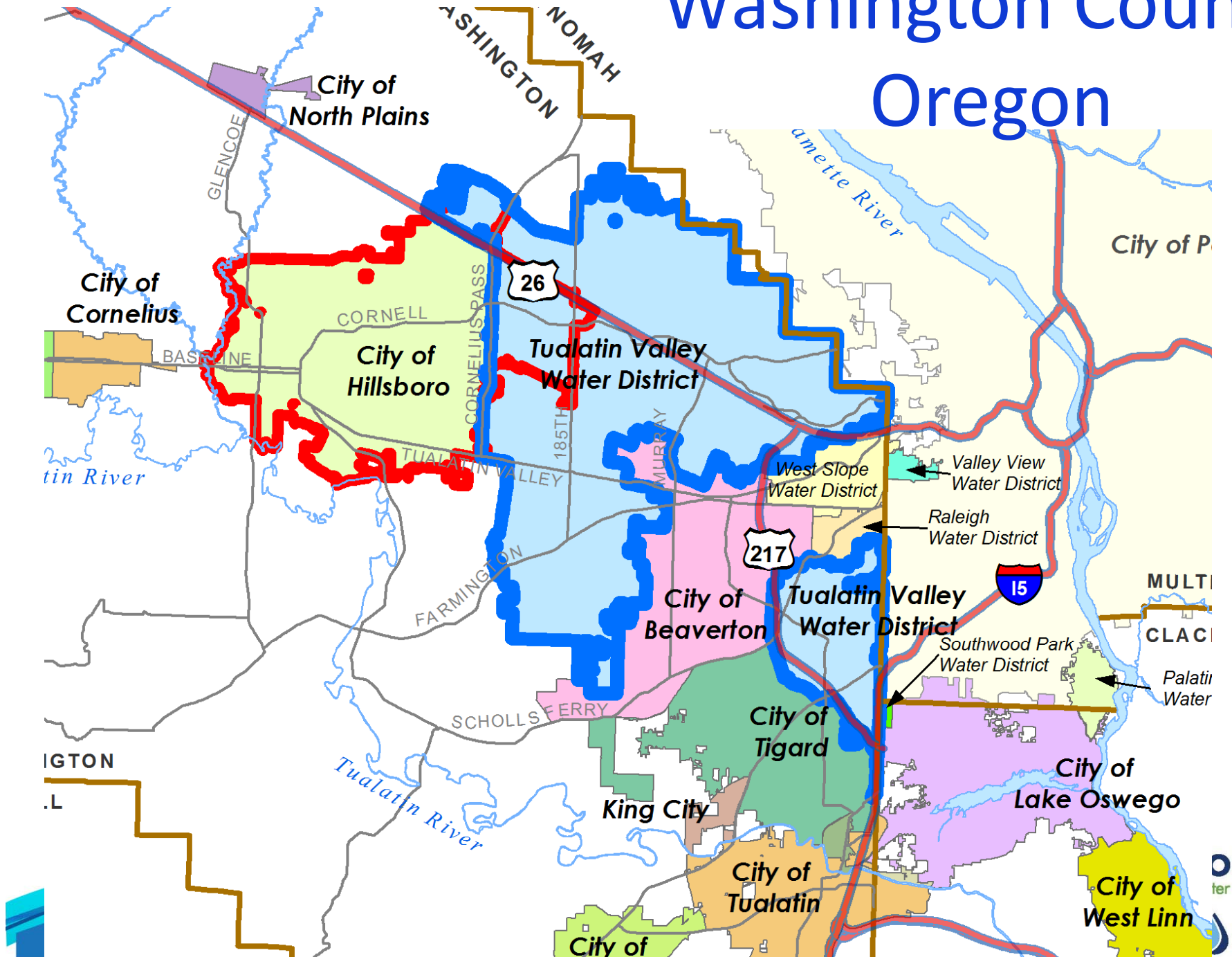
Presentation Overview

- Summary of Washington County water supplies
- Hillsboro's needs & process for evaluating options
- TVWD's needs & process for evaluating options
- Highlights of proposed system

Washington County, Oregon



Washington County, Oregon



TVWD & Hillsboro Systems

Characteristic	TVWD	Hillsboro	Total
Population Served	203,000	83,000	286,000
Service Connections	59,400	24,400	83,800
Average Day Demand (MGD)	19	14	33
Peak Day Demand (MGD)	39	28	67
Existing Sources	Portland, JWC & ASR	JWC	

Hillsboro's Evaluation of Options



Tualatin Valley Water District

Hillsboro Water



Hillsboro Evaluation Criteria

Cost	Overall cost of the option (net present value) including cost to both build and then operate the supply.
Source Water Quality	Fewer potential sources of contamination located upstream of option.
Treated Water Quality	Ability of treated water to meet a standard of quality comparable to treated water currently received by the City.
Reliability	Ability of the option to consistently deliver needed water, including consideration of events with the potential for causing water supply shortages, such as droughts or earthquakes.
Redundancy	Ability of the option to provide an additional, independent water supply.

Hillsboro Evaluation Criteria

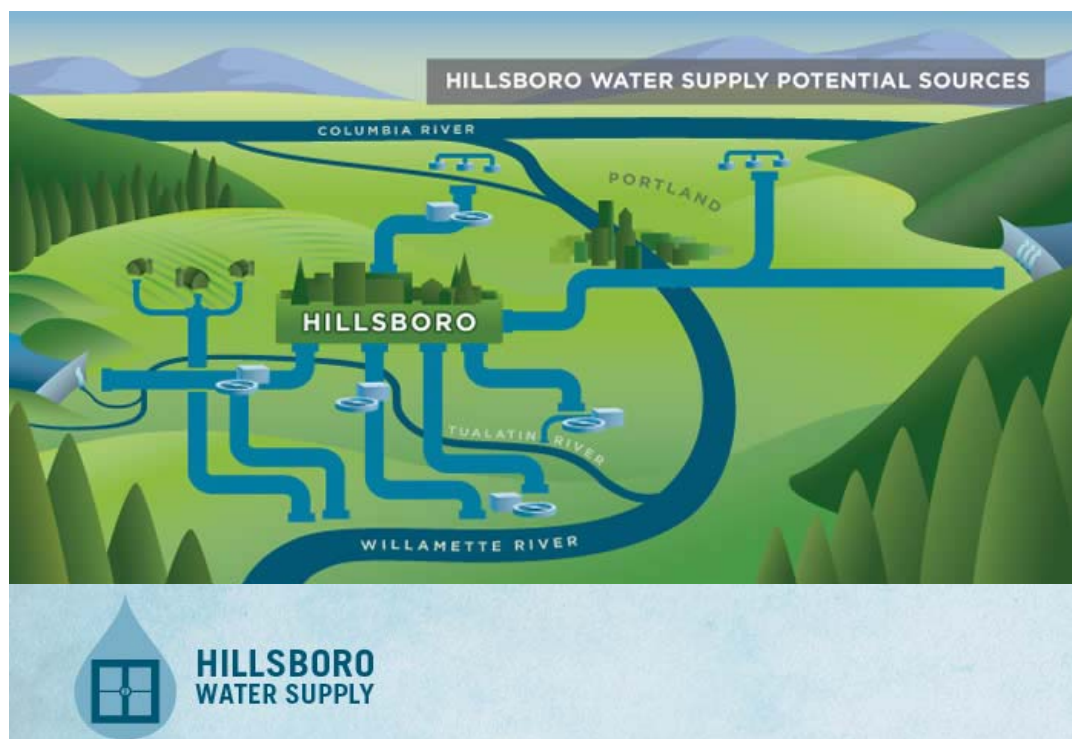
Environmental Impacts	Environmental impacts due to construction and/or operation of the supply.
Ownership	Ability of the City to control decisions regarding supply improvements, operations, and costs.
Operational Complexity	Potential level of difficulty in running a water supply and treatment system that maintains Hillsboro's current high level of service quality.
Implementation Risk	Risk that the project would not be completed on time, or at all, due to unforeseen circumstances, political roadblocks, or level of project complexity.
Responsiveness to Demand Growth	Ability to supply full projected growth in demand, and phase improvements in response to slower or faster growth.

Rating for Community Values

Criteria	Mid-Willamette	Tualatin Basin Water Supply Project	Portland Supply	Northern Groundwater
Estimated Total Project Cost	\$870,000,000 Lowest-cost option	\$1,080,000,000 +24% (\$210,000,000) compared to lowest-cost option	\$1,110,000,000 +28% (\$240,000,000) compared to lowest-cost option	\$1,140,000,000 +31% (\$270,000,000) compared to lowest-cost option
Hillsboro's Cost Share (assumes partner(s) will share project costs)	\$370,000,000	\$340,000,000	\$725,000,000	\$450,000,000
Reliability	+	-	0	+
Redundancy	+	-	+	+
Ownership	+	0	-	+
Operational Complexity	+	-	0	+
Implementation Risk	+	-	0	0
Source Water Quality	0	+	+	-
Treated Water Quality	0	0	0	0
Environmental Impacts	0	-	+	0
Responsiveness to Demand Growth	0	-	+	0

Engaged Community Throughout Study

- Website
- Speaking engagements
- Information handouts
- Events
- Annual Water Quality Report
- Utility Bill Notices
- Focus Groups
- Telephone poll
- City Council briefings
- Partner Advisory Committee



Tualatin Valley Water District



Results of Public Meetings: Values

On a scale of 1 (not important) to 7 (very important), how would you rate the following values to guide decisions about Hillsboro's future water source?

Community Values	Rating
Provide high quality treated drinking water.	6.96
Plan ahead for the long-term drinking water solution.	6.72
Own and control our own water supply.	6.07
Prepare to serve new residential customers.	6.04
Prepare to serve new and expanding business and industrial customers.	6.03
Promote water conservation as a very important water supply option.	5.90
Avoid or mitigate environmental impacts in developing any new water source.	5.62
Diversify Hillsboro's water sources.	5.63
Partner with other communities to develop regional water sources.	5.30



Shared Ownership of Mid-Willamette River Water Treatment Plant near Wilsonville

- ✓ Lower cost – less impact on rates
- ✓ Good water quality
- ✓ Ownership
- ✓ Reliable supply
- ✓ Provides redundancy
- ✓ Project is “do-able”
- ✓ Fewer environmental impacts



TVWD's Evaluation of Options

Your Reliable Drinking Water Future

A Conversation with Customers



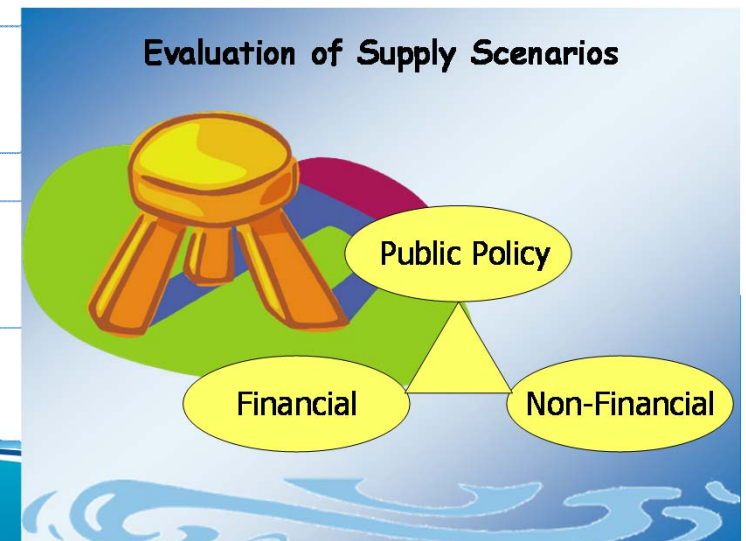
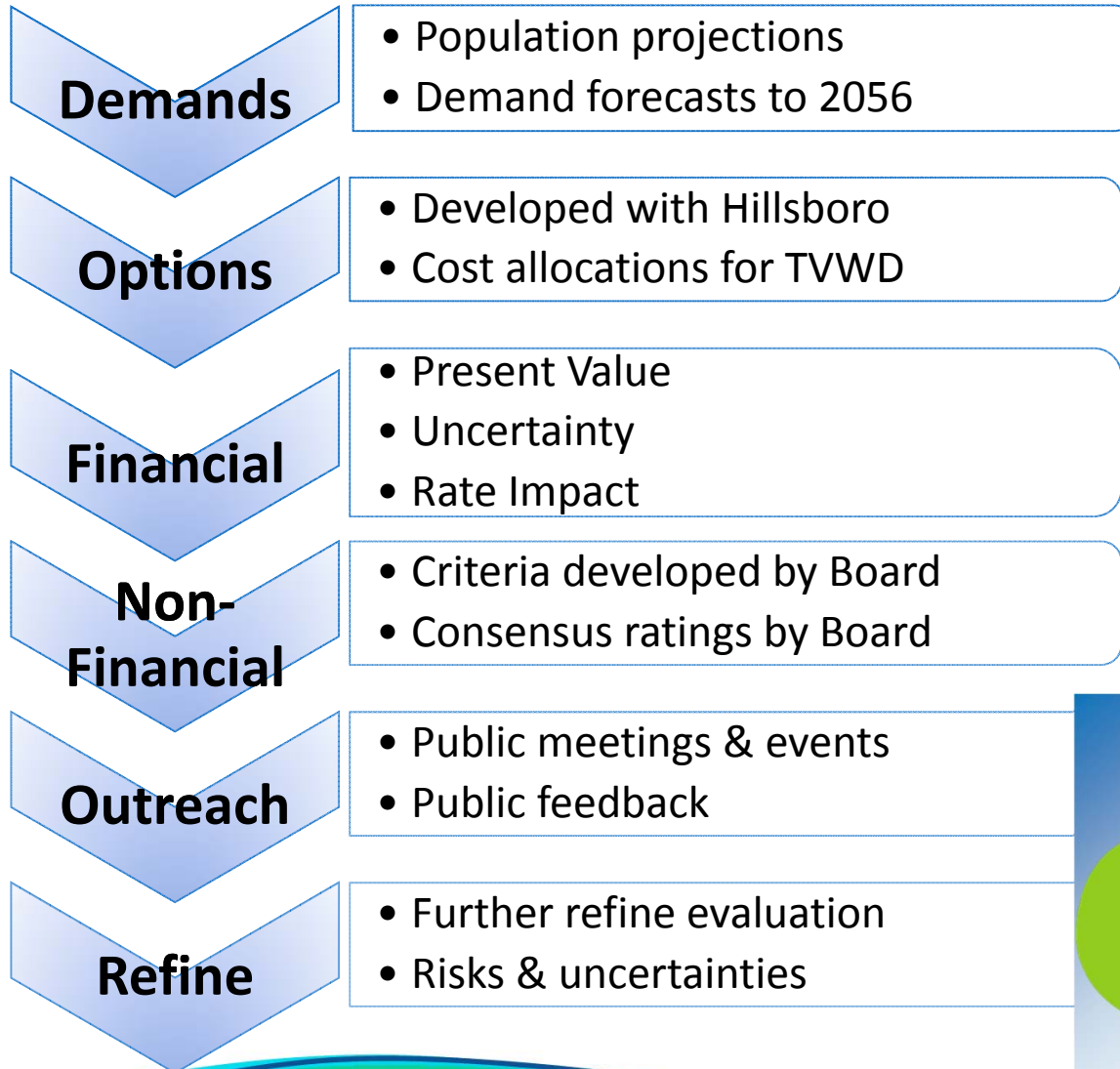
Tualatin Valley Water District



Tuala

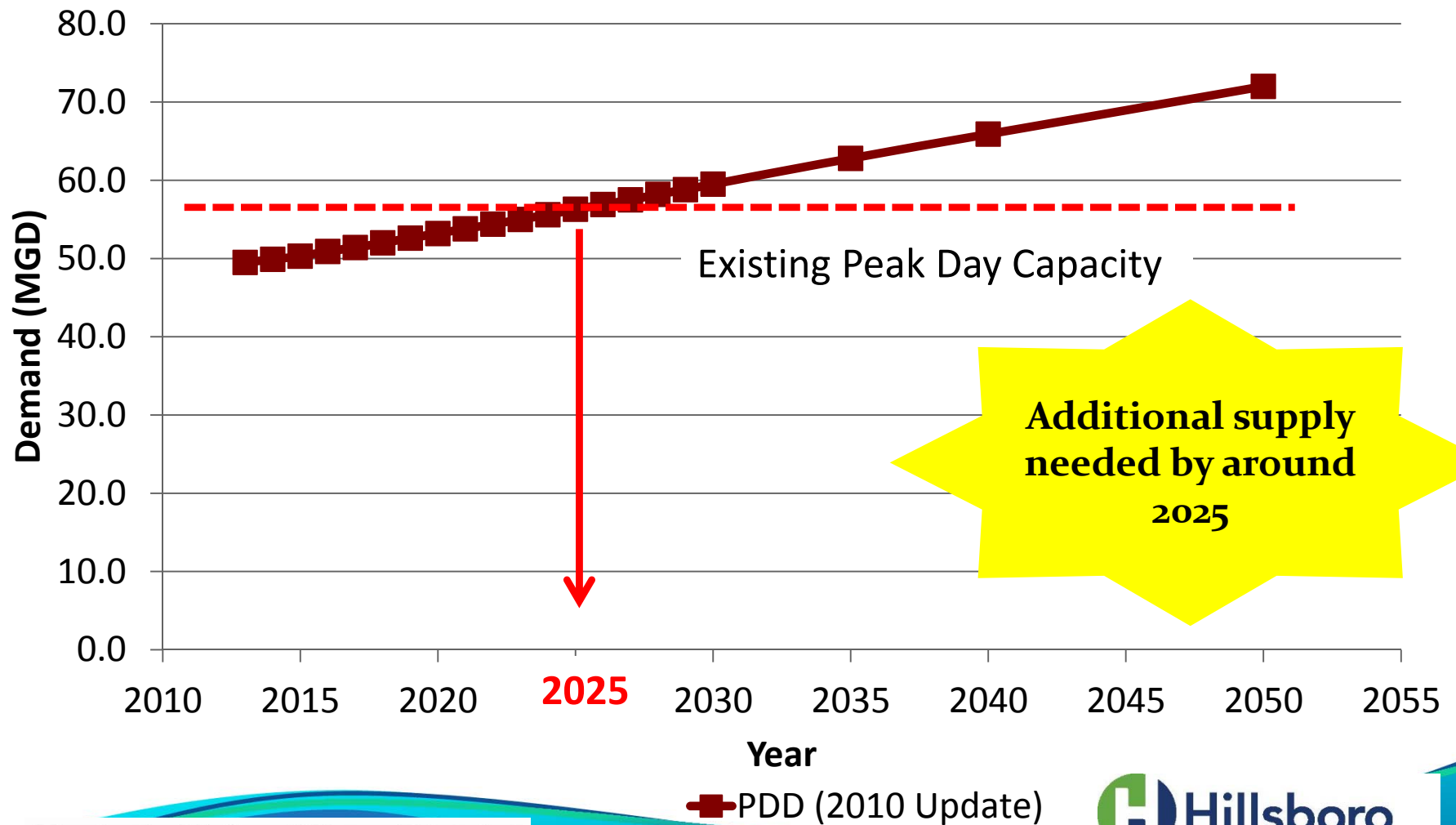


TVWD's Process for Evaluation of Options

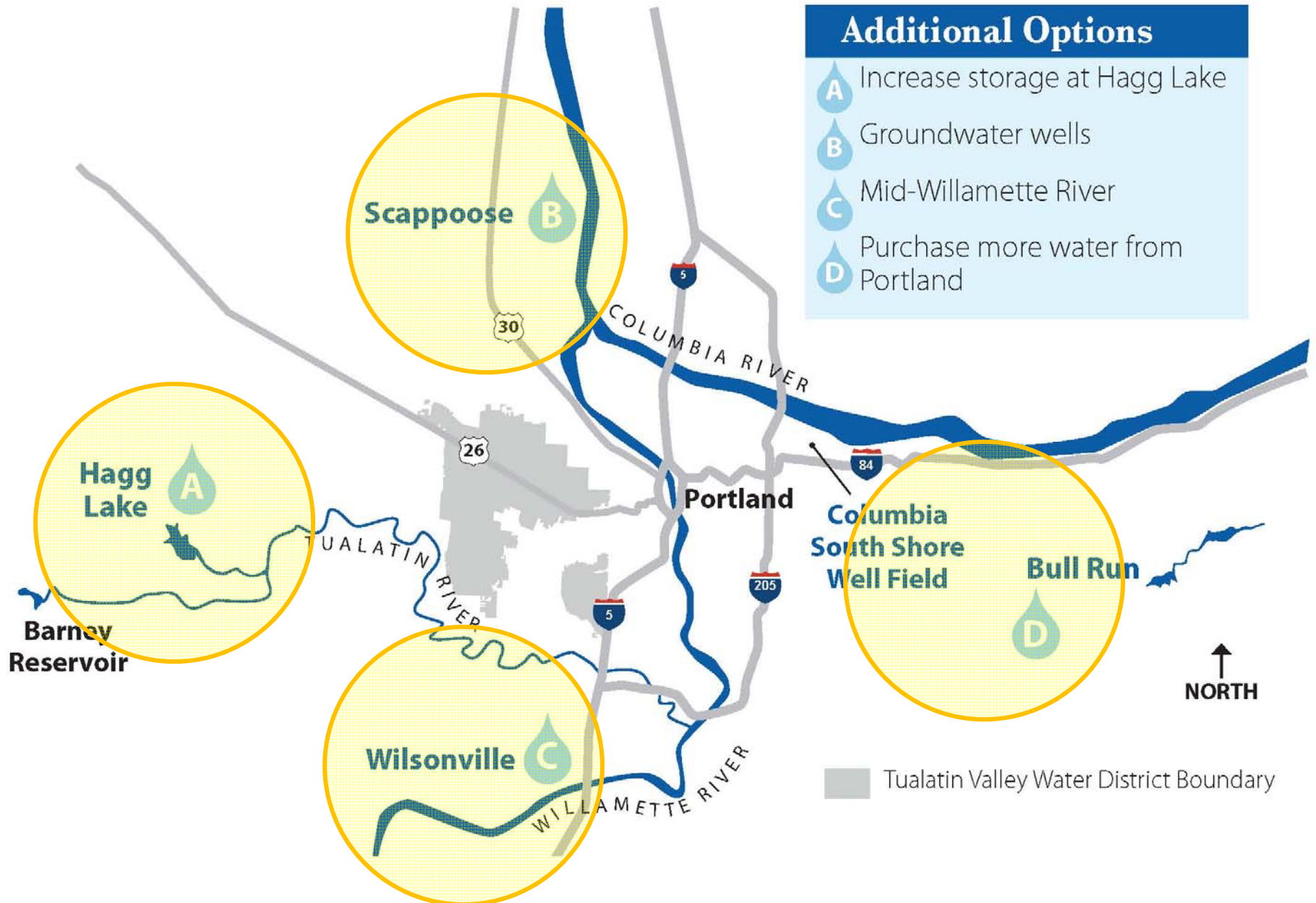


Preferred Option

TVWD Peak Day Demands



TVWD Supply Options

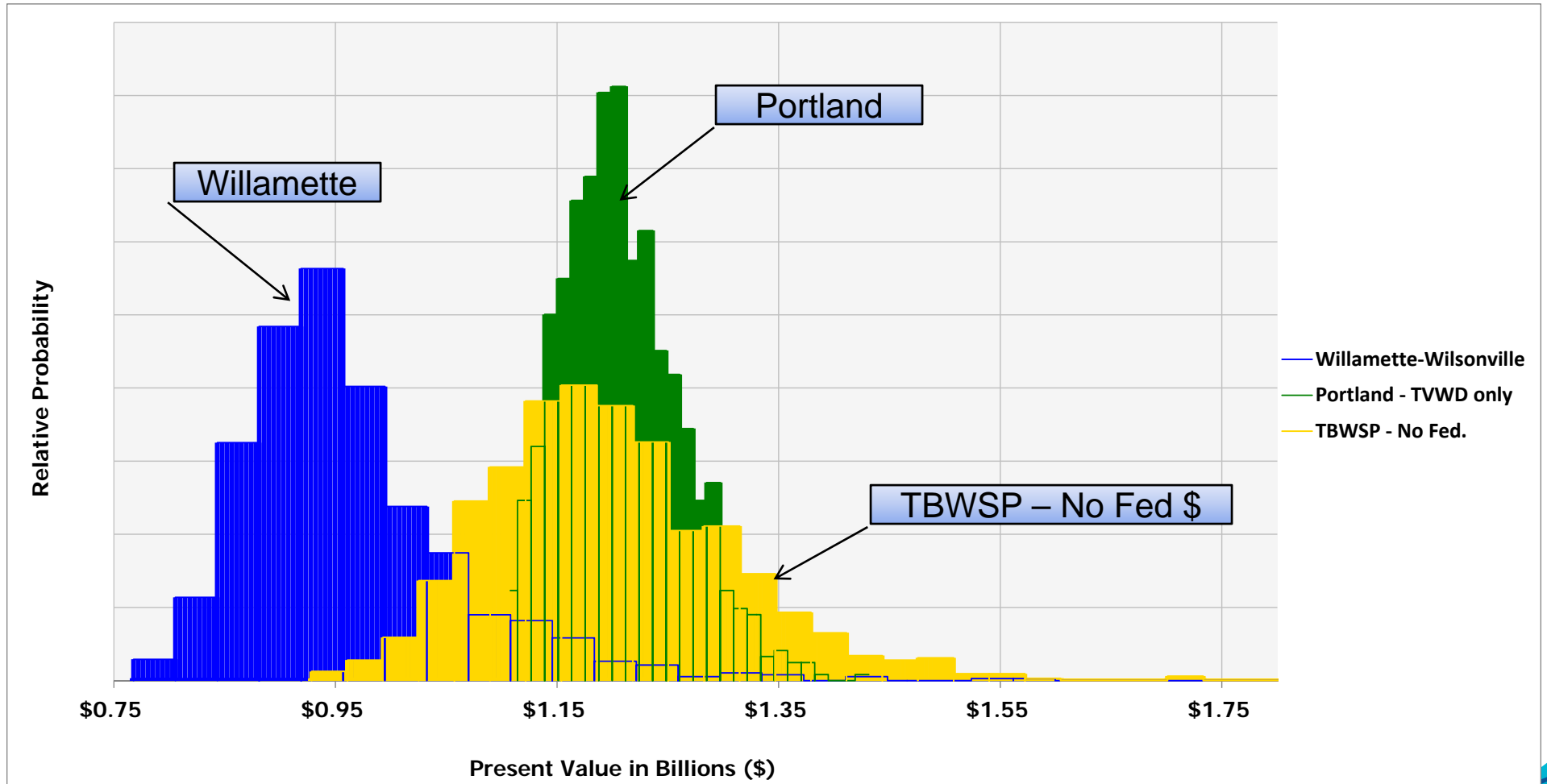


Present Value of Options & Scenarios

(Millions of Dollars)

Supply Option / Scenario	Present Value (Million \$)
Portland / Hillsboro partner, no treatment	\$ 922
Portland / TVWD only, no treatment	\$ 1,160
Portland / TVWD only, with UV treatment	\$ 1,208
Mid-Willamette at Wilsonville, Metzger from PWB	\$ 964
Mid-Willamette at Wilsonville, Metzger from Willamette	\$ 739
TBWSP / With 85% federal cost sharing	\$ 961
TBWSP / No federal cost sharing	\$ 1,201
Northern Groundwater	\$ 1,177

Uncertainty Evaluation of Present Value



TVWD Non-Financial Evaluation Criteria

Criteria		Description
1	Demand Uncertainty	Ability of the supply to provide additional capacity if demands are greater than projected and accommodate demands less than forecast thru phasing and/or scaling improvements.
2	Source Reliability	Ability of the source to deliver required capacity at all times, including consideration of available water resources, existing water rights, natural variation, seismic vulnerability and possible effects of climate change.
3	Source Redundancy	Ability to meet the goal of all areas served by at least two sources of supply.
4	Implementation Risk	Risks of project implementation delays and/or cost increases due to unplanned factors such as permitting risk, schedule delays, complexity of required partnering agreements and/or project complexity.
5	Public Acceptance	Public perception of each of the sources of supply including requirements of industrial and commercial customers as well as general public.
6	Community Impacts	Impacts on the community due to large infrastructure construction projects.
7	Metzger Fluoridation	Ability to continue non-fluoridated supply to Metzger.
8	Finished Water Quality	Ability of the source to meet or exceed existing and anticipated regulatory requirements and aesthetic standards.
9	Sustainability	Anticipated sustainability of source based on energy requirements, infrastructure requirements and environmental impacts.
10	Governance	Ability of the District to establish and preserve policies for initial construction and on-going maintenance of capital assets.

Non-Financial Evaluation of Options

Criteria	Portland	Mid-Willamette	TBWSP	Northern Groundwater
1. Demand Uncertainty	+	0	-	0
2. Source Reliability	0	+	+	+
3. Source Redundancy	0	+	0	+
4. Implementation Risk	0	0	-	-
5. Public Acceptance	+	0	0	-
6. Community Impacts	0	0	0	0
7. Metzger Fluoride	0	0	0	0
8. Finished Wtr Quality	0	+	+	0
9. Sustainability	+	0	-	-
10. Governance	-	+	0	+

Evaluation of Options

Criteria	Portland	Mid-Willamette	TBWSP	Northern Groundwater
1. Demand Uncertainty	+	0	-	0
2. Source Reliability	0	+	+	+
3. Source Redundancy	0	+	0	+
4. Implementation Risk	0	0	-	-
5. Public Acceptance	+	0	0	-
8. Finished Wtr Quality	0	+	+	0
9. Sustainability	+	0	-	-
10. Governance	-	+	0	+
Relative Present Value	26% higher	Least PV	25% higher	22% higher
2036 Rate Over Base	\$4.52/mo more	\$2.81/mo less	\$23.97/mo more	\$15.84/mo more



Evaluation Summary

Criteria	Portland	Mid-Willamette
1. Demand Uncertainty	+	0
2. Source Reliability	0	+
3. Source Redundancy	0	+
5. Public Acceptance	+	0
8. Finished Wtr Quality	0	+
9. Sustainability	+	0
10. Governance	-	+
Relative Present Value	26% higher	Least PV
2036 Rate Over Base	\$4.52/mo more	\$2.81/mo less

Summary of Risks & Uncertainties

Risks & Uncertainties	“More Resilient” Option
Water Quality Event	Willamette
Future Regulations	Willamette
Seismic Event	Willamette
Source Quality Changes	Willamette
Source Quantity Changes	Willamette
Schedule	Portland
Capital Costs	~ Equal
O&M Costs	Willamette
Ownership	Willamette
Political	~ Equal
Changes in Regional Economy	~ Equal
Regional Opportunity	Willamette



TVWD's Final Evaluation

Factors Favoring Portland Option

- Demand Uncertainty
- Public Acceptance
- Sustainability

Factors Favoring Mid-Willamette Option

- Source Reliability
- Source Redundancy
- Finished Water Quality
- Governance
- Costs

Tualatin Valley Water District



TVWD Public Outreach

- TVWD Board Meetings (5)
- TVWD Board Work Sessions (9)
- Outreach Information
 - Newsletters, website notices, dedicated webpage
 - Meeting announcements (354 postcards & letters)
 - Press releases and paid ads
 - Phone calls & emails to customers & public groups
- Events – Open Houses (2), Business Breakfast, Board Outreach
- Community Presentations – Public Affairs Forum, neighborhood mtgs
- TVWD employee briefings



TVWD Public Feedback

- 27 comment forms from public
- 5 emails from public
- Respondents valued: high quality water, ample supply, being good stewards of water, reliability, efficient & affordable service and the environment
- Option with greatest interest: Mid-Willamette (16) followed by Hagg Lake (12), Portland (7) and Northern Groundwater (3)
- Each option garnered questions; continued public outreach will be valuable with any of the options



TVWD Decision Milestones

- **April 2013** – TVWD Board of Commissioners adopts the mid-Willamette option as the preferred alternative for an additional supply source for the District by 2026.
- **August 2013** – TVWD Board of Commissioner adopted an Ordinance establishing the policies and providing direction to move forward on the development of the mid-Willamette option.

Willamette Water Supply System Overview

- Proposed 90 MGD expansion of existing WTP in Wilsonville
- 26 miles of large-diameter transmission pipeline
- 45 MG of terminal storage
- Partnership of Washington County water purveyors
- Planning and design to begin immediately
- In service by June 2026



Questions

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Tualatin Valley Water District

 Hillsboro
Water



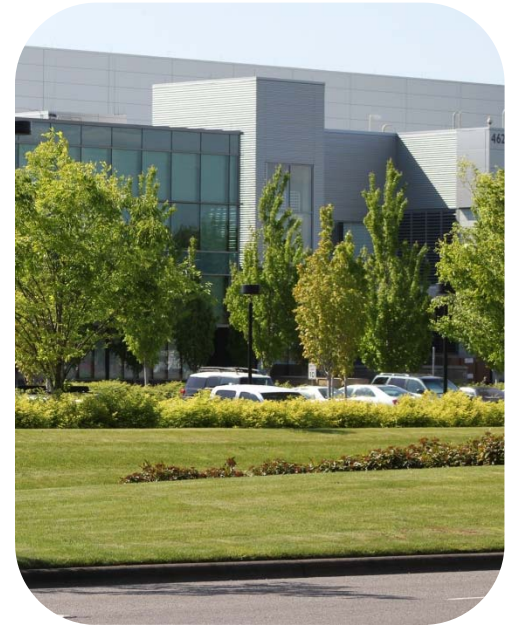
Estimated Project Costs

	Mid-Willamette	Tualatin Basin Water Supply Project	Portland Supply	Northern Groundwater
Total Project Cost Estimate	\$870,000,000 Lowest-overall cost option	\$1,080,000,000 +24% (\$210,000,000) compared to lowest-cost option	\$1,110,000,000 +28% (\$240,000,000) compared to lowest-cost option	\$1,140,000,000 +31% (\$270,000,000) compared to lowest-cost option
Hillsboro Cost Share	\$370,000,000	\$340,000,000	\$725,000,000	\$450,000,000
	<ul style="list-style-type: none"> • Net present value (NPV) in 2012 dollars • Phased construction with partners • 80 mgd system of water treatment and transmission facilities • Operation of the system for 25 years beginning in 2026 • Estimates also evaluated for cost risks • Hillsboro share assumes partner(s) will share project costs 			



Hillsboro's Evaluation of Options

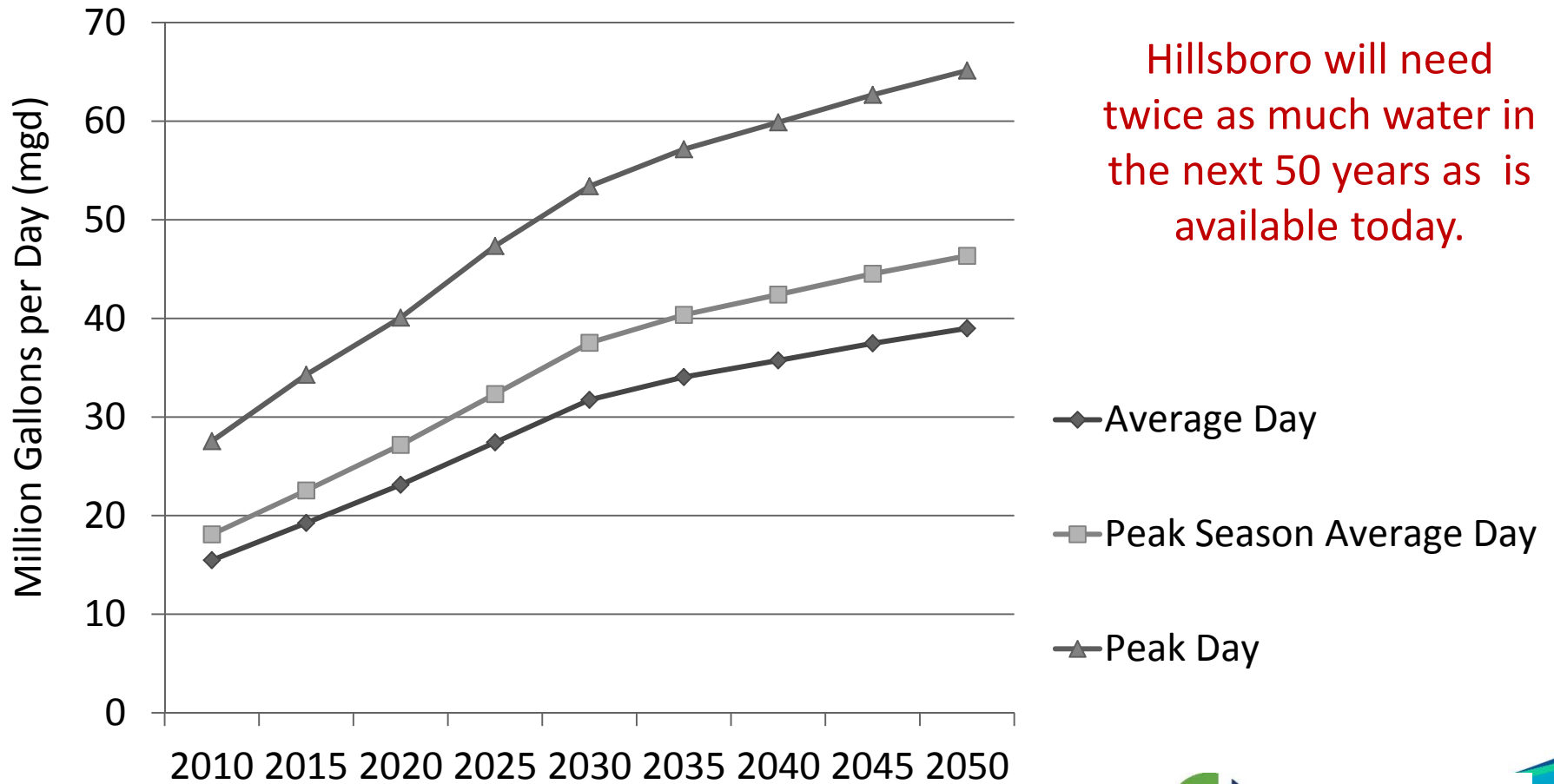
Public Health – Fire Protection – Jobs and the Economy



Tualatin Valley Water District



Hillsboro Demand Projections



Hillsboro Supply Study Process

Feb 2010-Sept 2012	Supply options research
Sep - Dec 2012	Community outreach
Dec - Jan 2012	Review of community feedback
Feb 2013	Decision on further study for preferred option

Meeting Announcements

Every effort taken to publicize community meetings.

Hillsboro's Future Water Supply – We need your input!

The City of Hillsboro Utilities Commission has made a preliminary designation of the Mid-Willamette option as the preferred additional water source for the next generation of Hillsboro residents. Before making a final decision on the designation, the Utilities Commission has initiated a public outreach process to encourage a community conversation about water supply in Hillsboro.

Hillsboro Water is providing opportunities for input at three interactive workshops this fall. Please consider attending one of the workshops and sharing your thoughts on current and future water sources. The sessions will include short presentations, electronic polling, and roundtable discussions.

Workshop Dates and Locations:
Food and drinks will be provided, along with childcare (2-12 yrs.) for workshop-attending families.

October 25, 2012:
Civic Center, 150 E. Main Street, Room 113B & C, 6:00-7:30pm

November 7, 2012:
(Workshop offered in English & Spanish.)
Lincoln Street Elementary, 801 NE Lincoln St., Library, 6:00-7:30pm

November 14, 2012:
Main Library, 2850 NE Brookwood Pkwy, Community Room, 6:00-7:30pm

Unable to attend a workshop? Comments also accepted at the website below, or call (503) 615-6702.

www.hillsborowatersupply.org

 Hillsboro Water Department shared a link. November 6

Abastecimiento Futuro del Agua en Hillsboro
¡Necesitamos su apoyo!

La Comisión de Servicios Públicos de la Ciudad de Hillsboro ha hecho una designación preliminar de Mid-Willamette como la fuente preferida de agua adicional para la generac...[See More](#)

 Hillsboro Water Supply Home
www.hillsborowatersupply.org


Hillsboro Water's Supply Alternatives Analysis is a project designed to identify the most viable water source for consideration as a future supply.

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The Oregonian
Hillsboro Argus
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Mid-Willamette

