

# TVWD's Water Supply Decision

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PNWS-AWWA Water Resources Workshop  
Securing Water Supplies for Growing Communities  
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# Presentation Overview

- TVWD background
- History of water supply options
- Recent evaluation of supply alternatives
- Decision-making process
- Recommendations & next steps

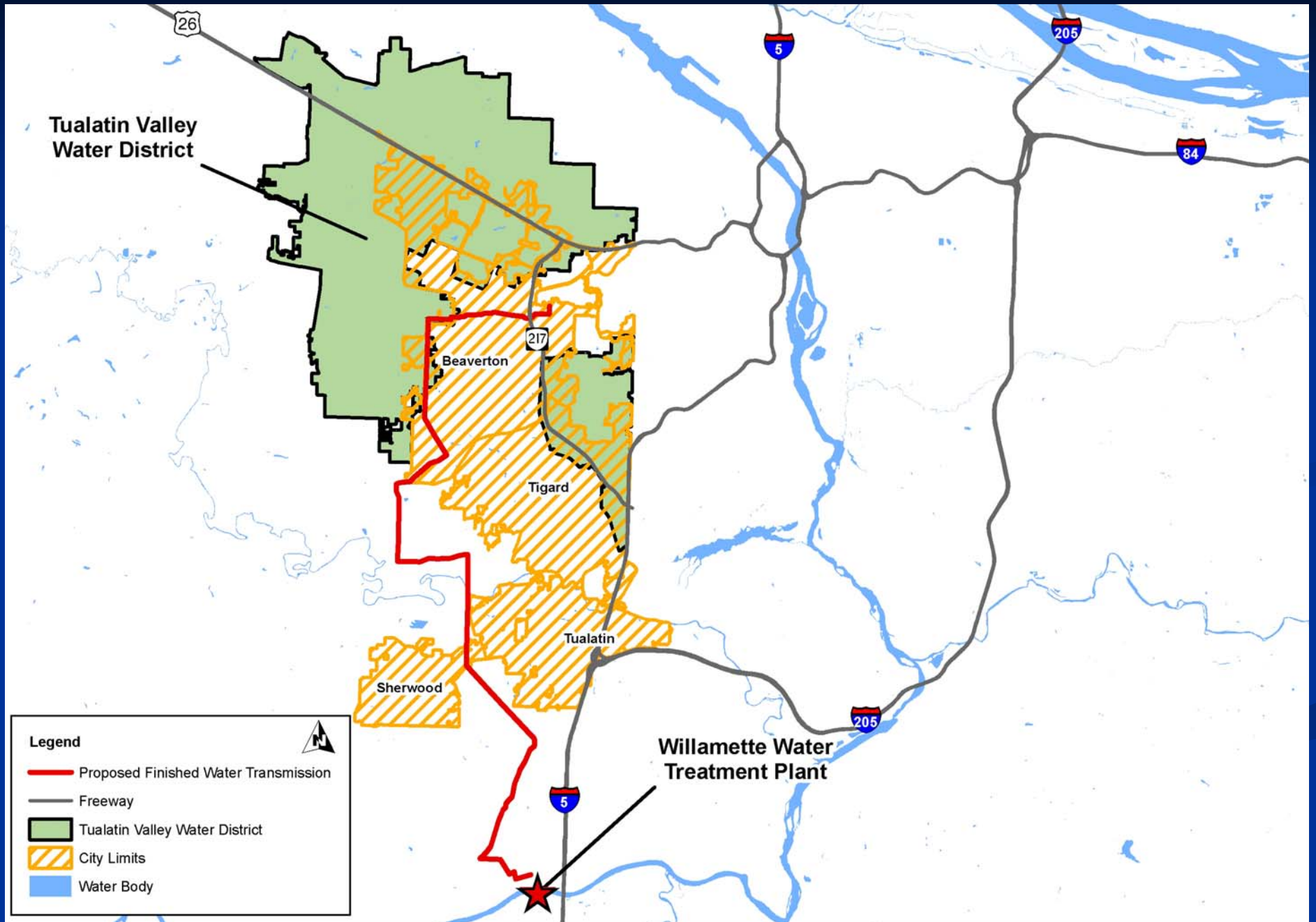
# TVWD Background

- One of the most rapidly growing areas in Portland

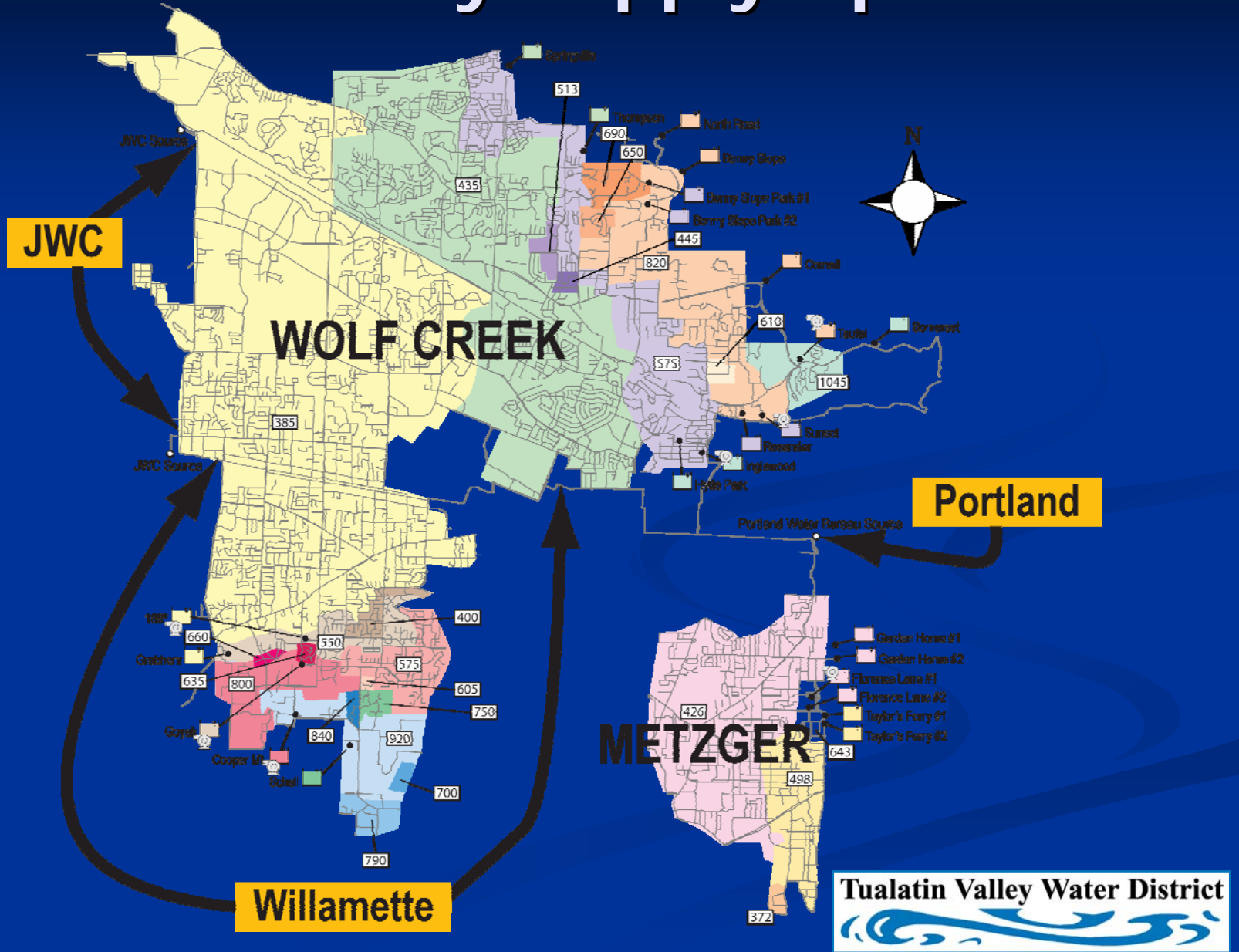
Year	Population	Avg Day Demand (mgd)	Max Day Demand (mgd)
2006	163,600	23	52
2056	311,400	38	79

- Customer base includes Nike & Intel – economic drivers
- Existing ownership - 10 mgd in Joint Water Commission
- Existing ownership - Willamette intake & site
- 10-year contract with Portland (7/1/06 - 6/30/16)

# TVWD Service Area



# Three Primary Supply Options



# History of Water Supply Options

- 1973 – Wolf Creek obtains 130 mgd Willamette water right
- 1979 – Wolf Creek enters into 25-year wholesale contract with Portland (extended to '07)
- 1992 – Portland supply shortage causes District to seek additional sources (multi-source strategy)
- 1994 – District becomes member of Joint Water Commission (Hillsboro, Forest Grove, Beaverton, TVWD, and later Tigard)

# History of Water Supply Options

- Mid 1990's – JWC & CWS begin work on Tualatin Basin Watershed Supply Project
- 1999 – TVWD becomes partner in expansion of Barney Reservoir
- 2000 – Portland begins discussions of new long-term wholesale contract
- 2001 – TVWD becomes partner with City of Wilsonville to construct Willamette River Water Treatment Plant

# History of Water Supply Options

- 2001 – Portland proposes study to evaluate feasibility of regionalization of the Portland supply system – BRDWA
- 2002 – Portland and regional partners discontinue discussions of regionalization
- 2003 – District and regional water providers resumes negotiations with Portland for long-term wholesale contract



# History of Water Supply Options

- February 2006 – TVWD receives letter from Portland stating that negotiations were over
- March 2006 – TVWD initiates Phase 1 of Water Supply Improvements Program and focuses on the Willamette as new water source
- April 2006 – Portland and TVWD sign new ten-year wholesale supply agreement
- December 2006 – TVWD sells 5 mgd interest in Willamette River Water Treatment Plant to City of Sherwood for ~ \$7 million

# Recent Evaluation of Alternatives

- **Water Supply Improvements Program, Phase 1** (2006 – 2007) –  
Scope, schedule, budget for Willamette Supply
- **Water System Mater Plan Update** (2006-2007) –  
Evaluate supply options and recommend 50-year plan
- **Presumptive Selection** (April 18, 2007) –  
TVWD Board preliminary selection of JWC/TBWSP supply
- **Water Supply Improvements Program, Phase 2** (2007-2008) – Confirmation of cost & schedule for TBWSP and updated evaluation of key supply options

# Original Water Supply Scenarios

Scenario		Source Capacity (mgd)		
		Portland	JWC	Willamette
1A	<u>Willamette</u> w/o Partners, JWC (10), Portland (Metzger)	Metzger	10	Balance
1B	<u>Willamette</u> w/ Partners, JWC (10), Portland (Metzger)	Metzger	10	Balance*
2A	<u>Willamette</u> w/o Partners, JWC (10), No Portland	0	10	Balance
2B	<u>Willamette</u> w/ Partners, JWC (10), No Portland	0	10	Balance*
3	<u>JWC</u> (most), Portland (w/o peak)	Existing 13.2 mgd	Balance	0
4	<u>JWC</u> (all)	0	Balance	0
5	<u>JWC</u> (most), Portland (Metzger)	Metzger	Balance	0

\* With additional capacity to serve cost sharing partners

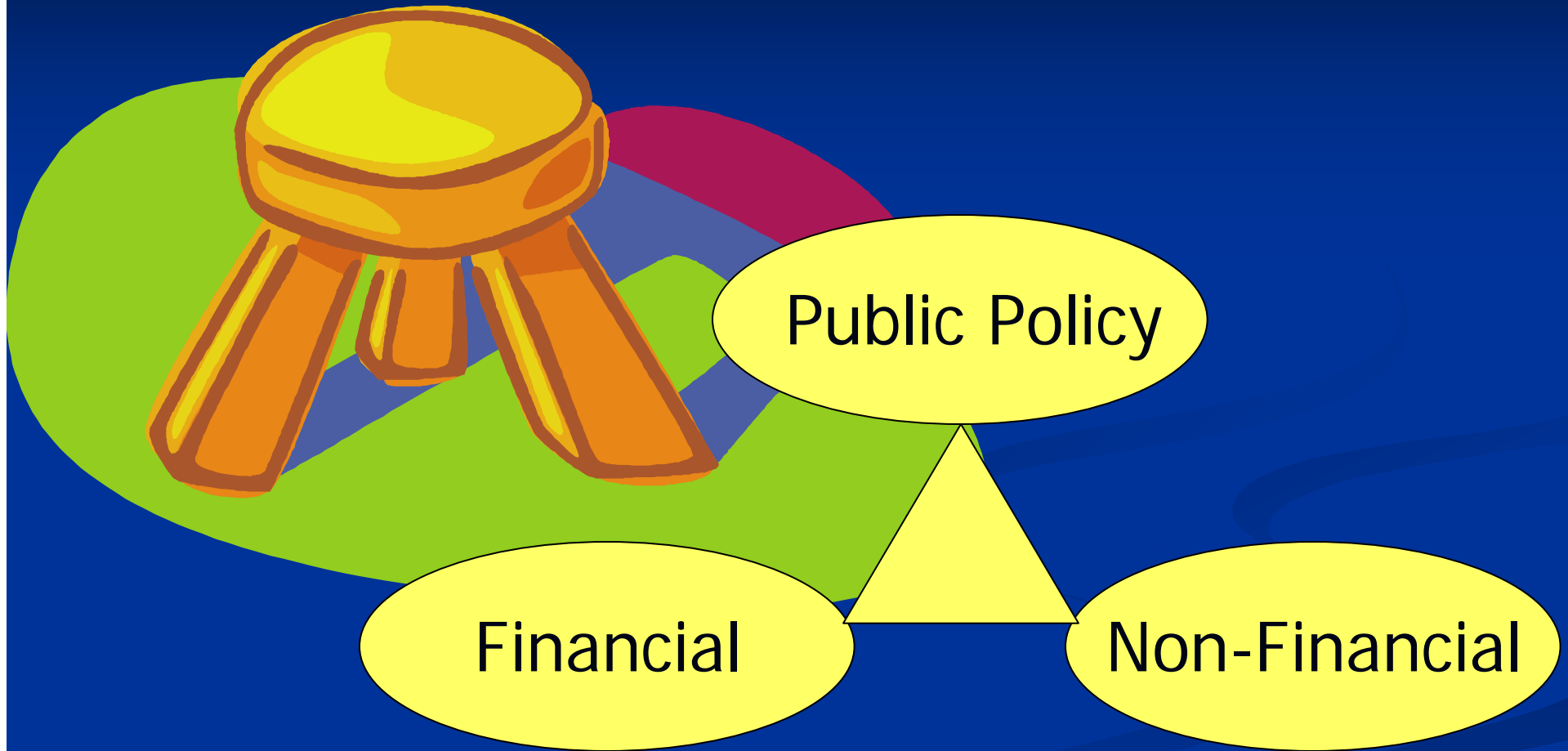
# Updated Water Supply Scenarios

Scenario		Source Capacity (mgd)		
		Portland	JWC	Willamette
1A	<u>Willamette</u> w/o Partners, JWC (10), Portland (Metzger)	Metzger	10	Balance
1B	<u>Willamette</u> w/ Partners, JWC (10), Portland (Metzger)	Metzger	10	Balance*
3	<u>JWC</u> (most), Portland (w/o peak)	Existing 13.2 mgd	Balance	0
5	<u>JWC</u> (most), Portland (Metzger) **	Metzger	Balance	0
6	<u>Portland</u> (most), JWC (10)	Balance	10	0

\* With additional capacity to serve cost sharing partners

\*\* Preserves option to serve Metzger from JWC in the future

# Evaluation of Supply Scenarios

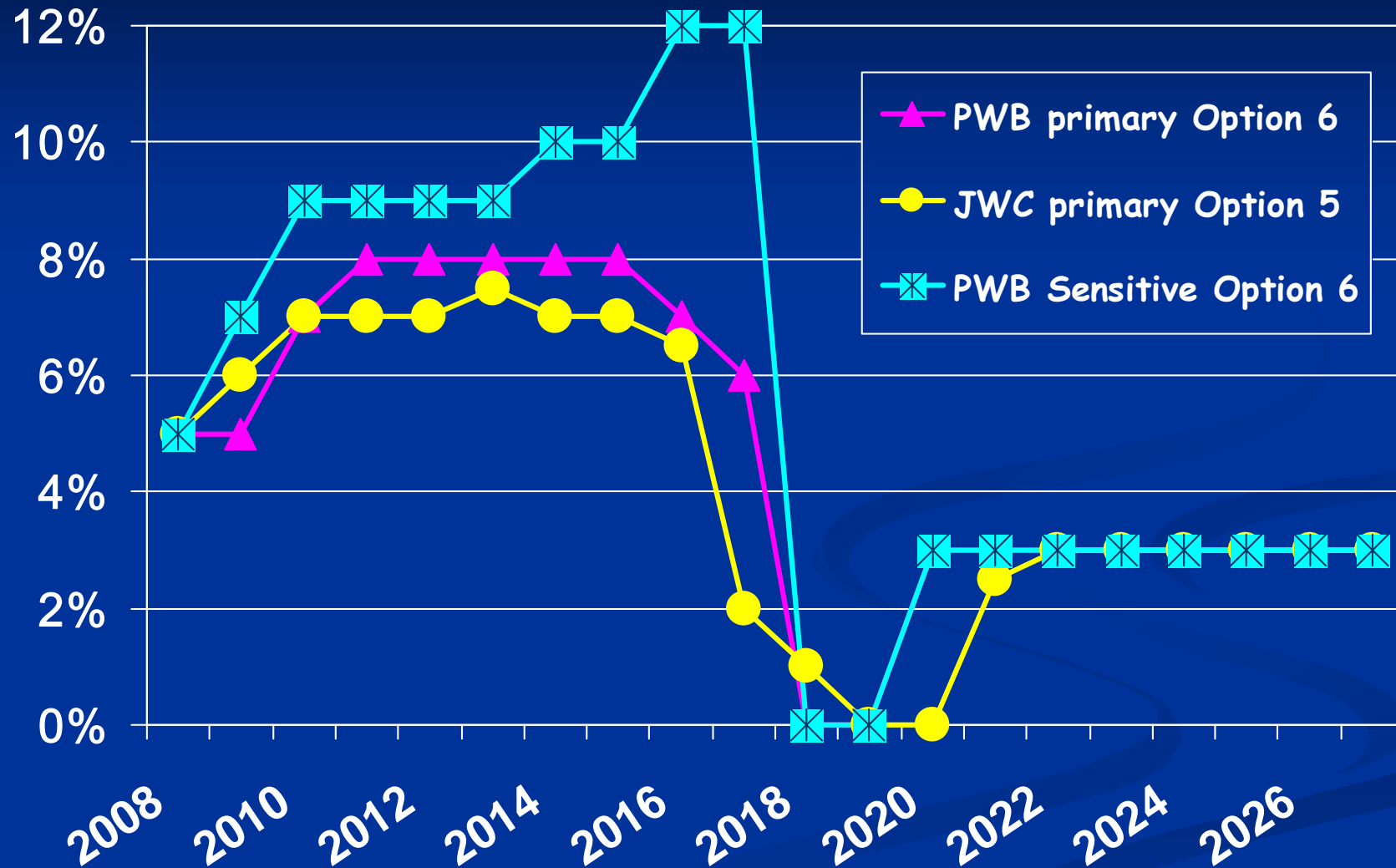


# Financial Evaluation

Scenario		Undiscounted Cost (\$ billion) <sup>(1)</sup>	Owned Peak Day Capacity (mgd)
1A	<u>Willamette</u> w/o Partners, JWC (10), Portland (Metzger)	2.1	74
1B	<u>Willamette</u> w/ Partners, JWC (10), Portland (Metzger)	2.1	74
3	<u>JWC</u> (most), Portland (existing w/o peaking)	2.7	71
5	<u>JWC</u> (most), Portland (Metzger)	2.0	74
6	<u>Portland</u> (most), JWC (10)	3.3	10

(1) Includes RAV and lower-range estimates for Portland capital projects.

# Comparison of Annual Rate Increases



# TVWD Residential Bi-Monthly Bills

(Estimated Based on TVWD Financial Forecast)

<i>Year</i>	<i>Portland Sensitivity</i>	<i>PWB/JWC Option 6</i>	<i>JWC/ Metzger Option 5</i>
2008	\$ 48.55	\$ 48.55	\$ 48.55
2012	\$ 67.36	\$ 63.44	\$ 62.77
2017	\$111.40	\$ 90.75	\$ 83.35
2022	\$121.76	\$ 99.21	\$ 88.06
2027	\$141.09	\$115.00	\$102.21
2028	\$141.09	\$118.51	\$106.73



# Non-Financial Analysis

Evaluation Criteria	Scenario				
	1A	1B	3	5	6
Demand uncertainty	+	+	0	0	0
Source reliability	+	+	+	+	+
Source redundancy	0	0	0	0	0
Partnering complexity	+	0	-	-	0
Public acceptance	-	-	0	0	+
Community impacts	-	-	0	0	-
Metzger fluoride	+	+	+	+	+
Finished WQ	0	0	0	0	0
<b>NET TOTAL</b>	<b>+2</b>	<b>+1</b>	<b>+1</b>	<b>+1</b>	<b>+2</b>

# Public Policy Perspective

- Significant public input
  - Since 2002 – Discussed water supply options at 36 of 101 scheduled Board meetings
  - In 2007 – Water supply was key topic on agenda for 9 of 18 scheduled Board meetings
  - Conducted open house - notice sent to 75,000 homes
  - 6 public presentations to community groups
- Extensive public testimony at December 2007 Board meeting

# Key Messages from Public

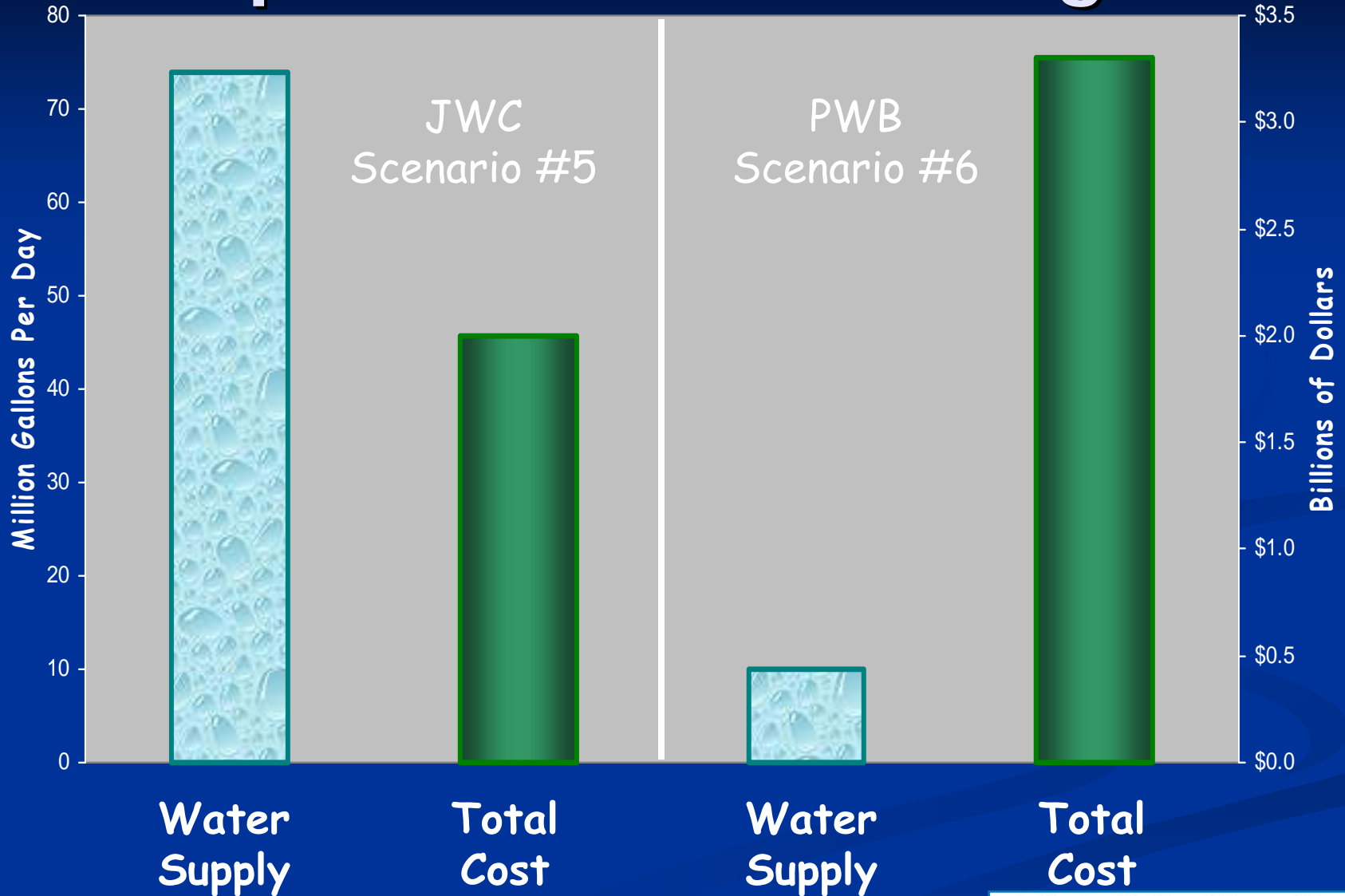
- Strong preference against Willamette
- Significant local support for JWC/TBWSP
  - Multiple benefits (water supply, irrigation, recreation, environmental)
  - Public partnerships (federal, county, cities, districts)
  - Environmental interests
  - It's an existing source
- Limited understanding of current supplies
  - Preference for Bull Run – even if really JWC
  - Preference for Bull Run – even if really groundwater
- Appreciation for critical evaluation of options



# TVWD Board Policy Perspective

- Maintain multiple supplies for District
- Ownership limits dependence on others
  - Ability to control current & future costs
  - Growth pays for growth through SDCs
  - Control O&M policies & practices
- Provide multiple regional benefits beyond just water supply
- Preserve future supply options

# JWC Option Provides Lasting Value



# TVWD's Water Supply Decision

- December 19, 2007 – TVWD Board adopted JWC/TBWSP as the District's future primary supply source
  - Ownership of majority of water supply
  - Lowest overall cost over 50 years
  - Preserves multiple sources of supply
  - Continues current supply sources
  - Many partners to share costs
  - Regional project provides multiple benefits

# TVWD's Water Supply Decision

- JWC/TBWSP supply source
  - To be implemented by 2016
  - Metzger to be supplied by Portland
  - Preserve option for purchasing water from Portland as emergency supply
- Discontinue capital investment in Willamette supply at this time
- Provide emergency back-up from JWC's regional supply to Portland

# TVWD's Water Supply Decision

Questions ?

Tualatin Valley Water District

