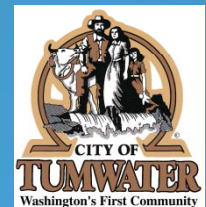


# 2010 Water System Plan Update

Chapter 5 – Water Resource Analysis

June 4, 2010



# Resource Analysis

- Water Rights
- Source of Supply (Options)
- Reliability



# Water Rights - Current

Source	Instantaneous (gpm)	Annual (acft)
Palermo WF	3,105	7,039
Bush WF	1,200	974
Port WF	3,229	2,542
Lakeland Manor	100	40
<i>Brewery WF</i>	<i>2,172</i>	<i>761</i>
<i>Lathrop Industrial</i>	<i>300</i>	<i>70</i>
<i>Tumwater Golf Course*</i>	<i>2,000</i>	<i>400</i>
<b>Totals*</b>	<b>10,106</b>	<b>7,400</b>



# Water Rights - Pending

- Southwest WF (2,226 Qi / 2,154 Qa)
- Northeast WF (2,000 Qi / 3,500 Qa)
- “Bruhn” (70 Qi / 21 Qa)

***Total Pending Rights: 4,296 Qi / 5,675 Qa***

## Other Water Right Actions:

- *Future Acquisition* (1,000 Qi / 300 Qa)
- Israel Rd to SW WF (txfr) (600 Qi / 60 Qa)

***Total Water Right Additions: 5,296 Qi / 5,975 Qa***



# Water Rights – Long Term

	Water Right Qty		Existing Cons.		Existing Surplus / Deficit		20-Year Cons.		20-Year Surplus / Deficit	
	Qi	Qa	Qi	Qa	Qi	Qa	Qi	Qa	Qi	Qa
Existing Water Rights	10,106	7,400	7,680	5,166	2,426	2,234	11,235	7,553	(1,129)	(153)
<i>Pending Apps</i>	<i>4,296</i>	<i>5,675</i>								
<b>Total Rights &amp; Apps</b>	<b>14,402</b>	<b>13,075</b>			<b>6,722</b>	<b>2,909</b>			<b>3,167</b>	<b>5,522</b>
w/ Potential	15,402	13,375			7,722	3,209			4,167	5,822

Qi: Instantaneous Demand (gallons per minute)

Qa: Annual Quantity (acre-feet)



# Demand Considerations

- Conservative Forecast
  - 2.4 Peaking Factor (Maximum Day Demand) (*1.7, Avg.*)
  - Assumes 10% growth for largest consumer (6 yrs)
  - Assumes add'l 1.01 MGD for new consumers
  - No acquisition of add'l right (1,000 gpm / 300 acft)
  - No water conservation activities
    - *~110,000 gpd (~40 MG annually by 2015)*

## Conservative (High) Scenario



# Source Analysis

- Groundwater
  - Water Right Changes/Additions
- Water Conservation
- Reclaimed Water
  - Mitigation
  - Irrigation
  - Commercial/Industrial Use
- Interties
- Artificial Recharge



# Reliability

- Source Reliability
  - Spatial distribution
  - Design Criteria (planning w/ largest source out)
  - Water Quality Monitoring
  - Interties
- Wellhead Protection
  - Monitoring & Inspection
  - WHPA zones / Aquifer Protection Overlay
- Facility Reliability
- Water Shortage Response Planning



Questions?

