Water System Plan 2015-2020

Utility Advisory Committee

March 5, 2015

Tonight's Agenda

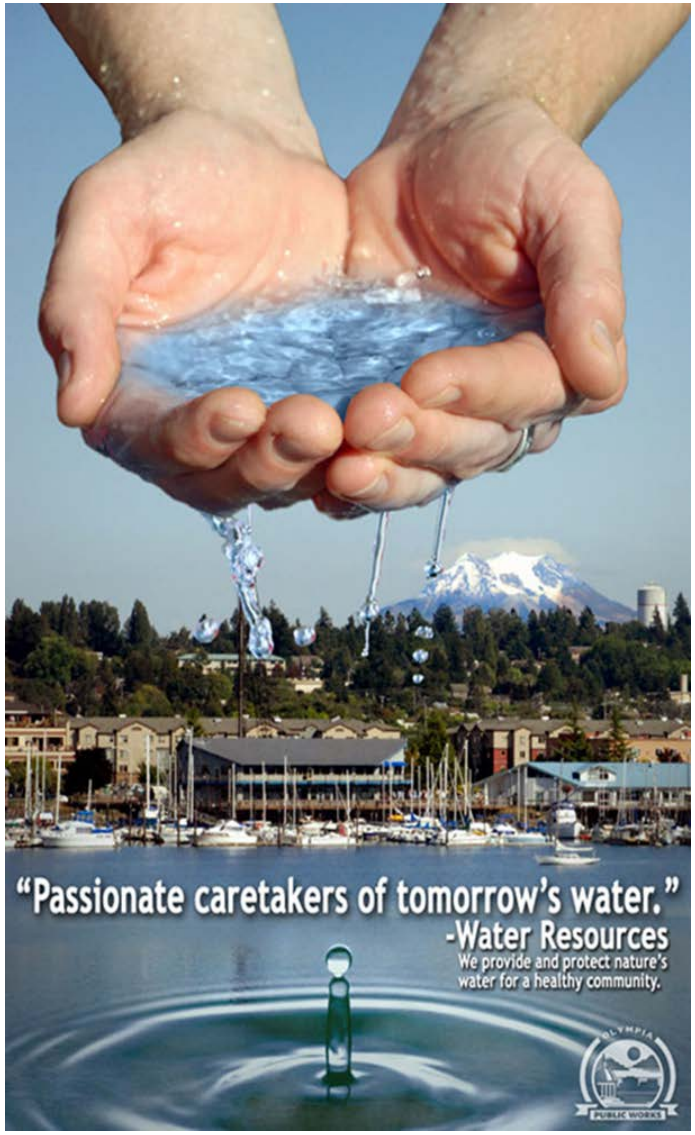
1) Planning Framework

2) Accomplishments

3) Overview of Plan & Highlights
   - Goals, objectives, strategies
   - Capital improvements program

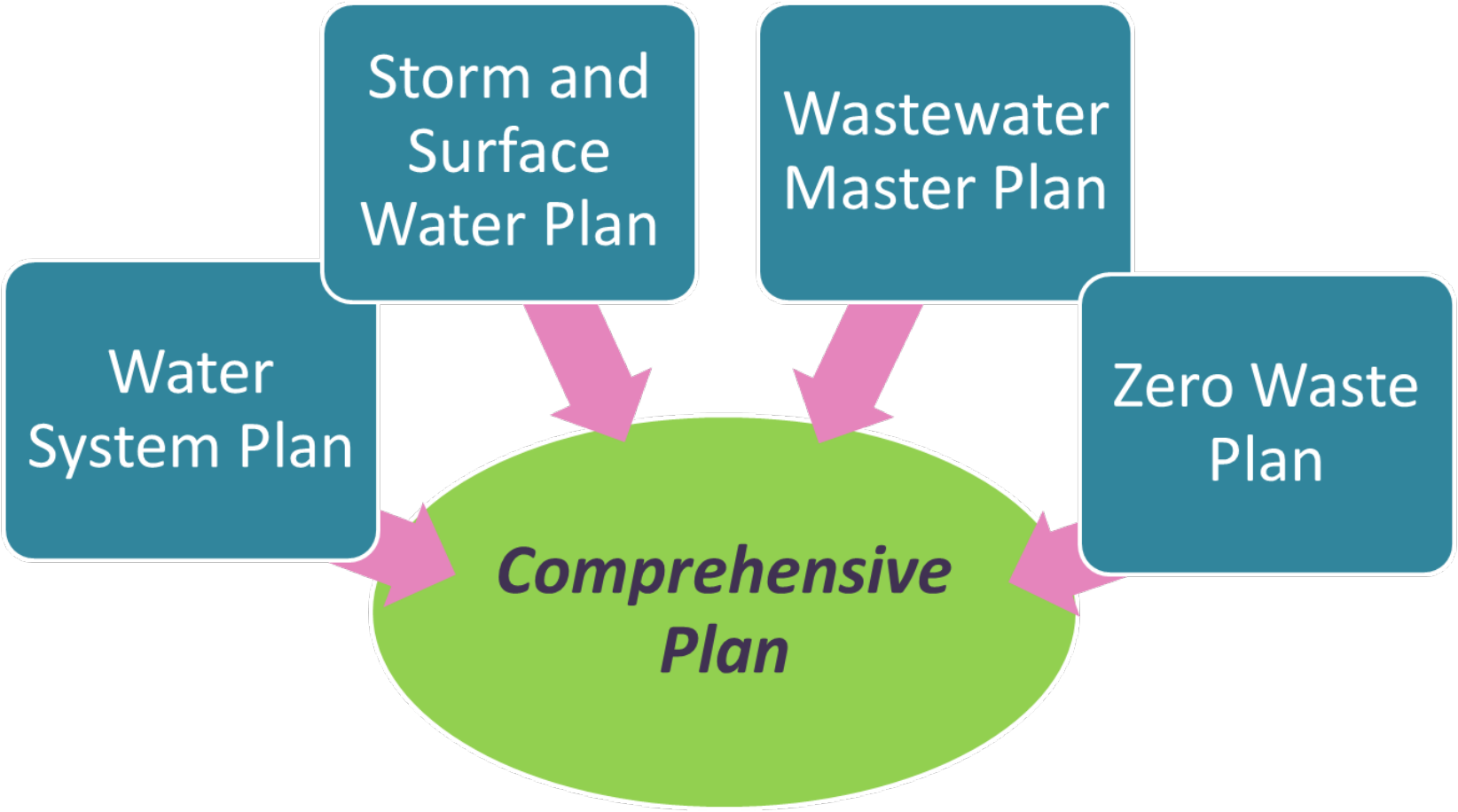
4) Next Steps

5) Questions



Planning Framework

Planning Framework



Accomplishments

Transitioned from McAllister Springs to McAllister Wellfield

Reserved Water Rights for 50+ Years

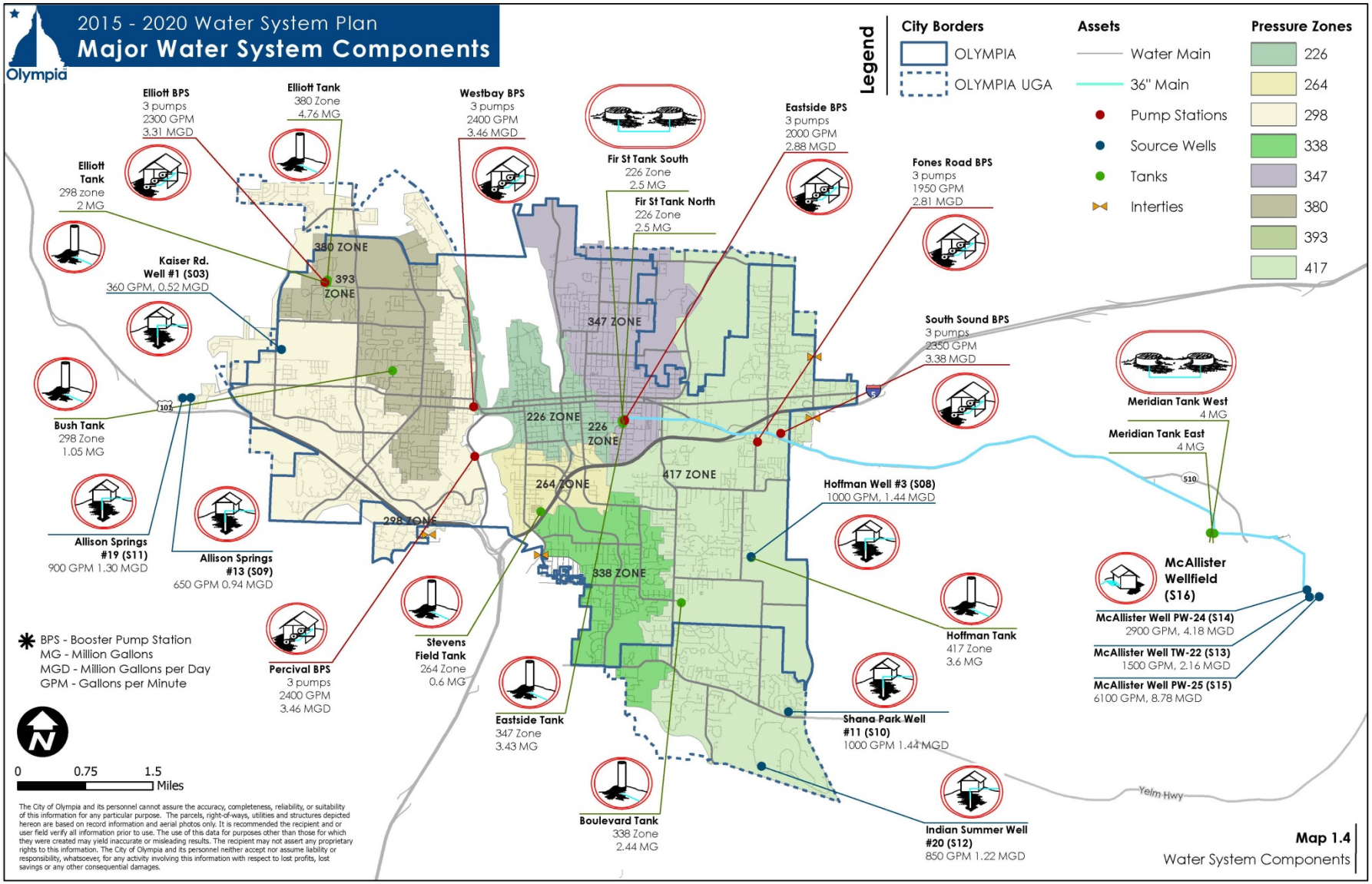
- Existing water rights = 29,649 AFY
- Forecasted 20 year demand = 17,024 AFY
- Forecasted 50 year demand = 20,276 AFY

Achieved Water Conservation Goals

- Goal = Reduce water use by 5% per service connection.
- By 2013, per connection consumption had decreased by 11.4%.

2015-2020 Water System Plan

2015-2020 Water System Plan



2015-2020 Water System Plan

Figure 3.10 Average Day Demand Forecast Details

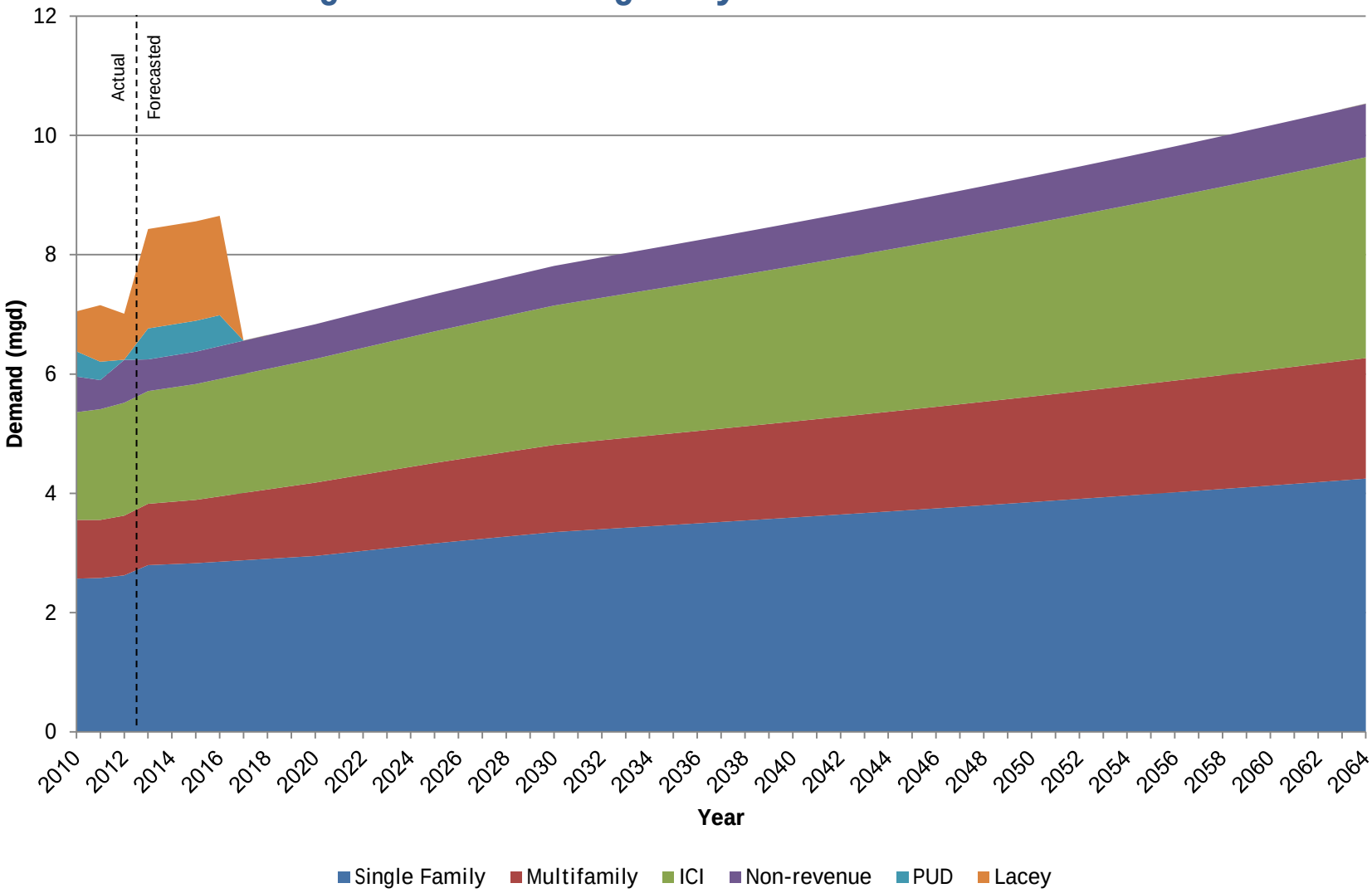
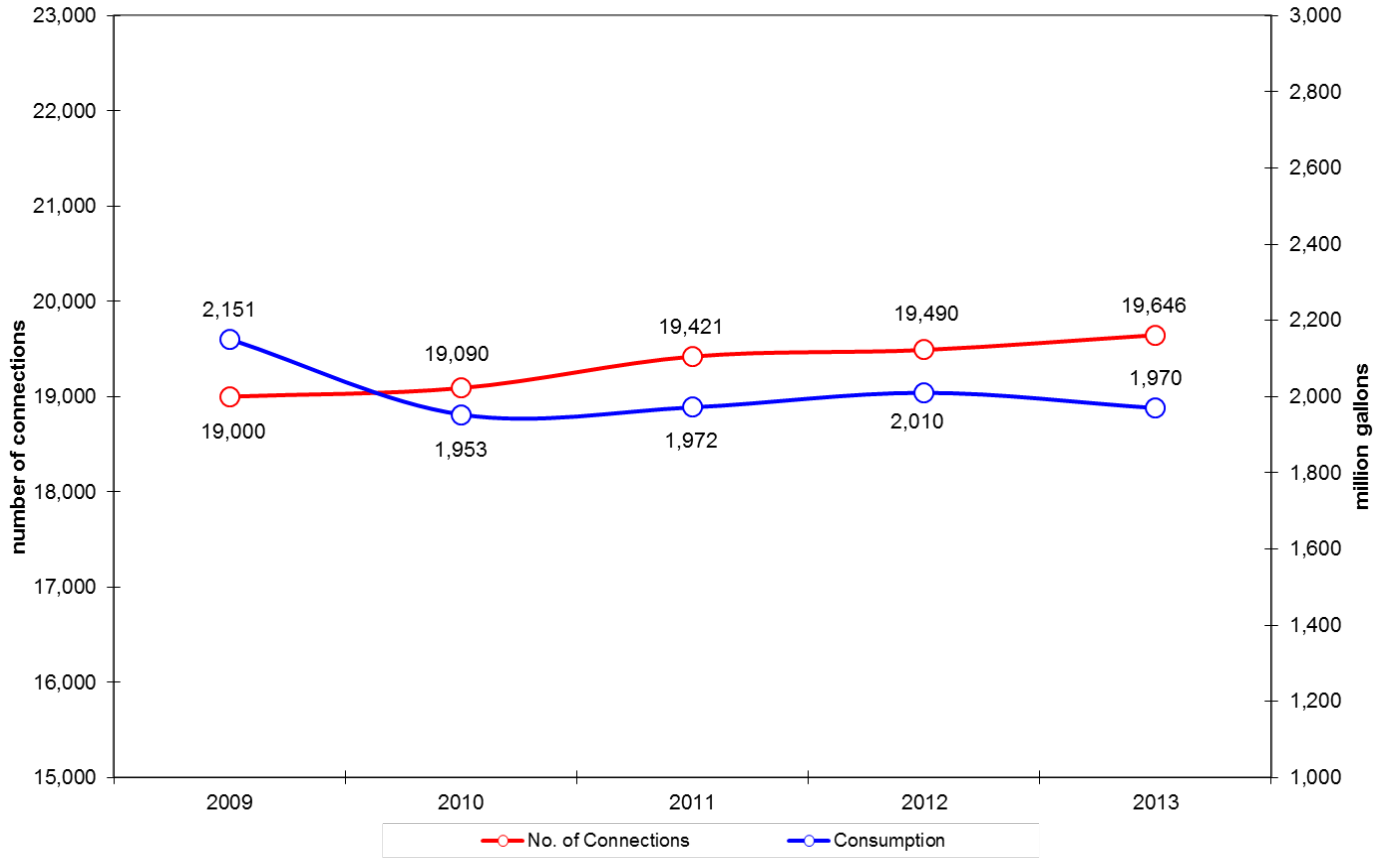


Figure 5.1 Annual Water Use and Number of Connections, 2009 – 2013



Goals, Objectives, Strategies

Goal 3. Olympia's water supplies are used efficiently to meet the present and future needs of the community and natural environment. (Chapters 5 & 6)

Objective 3A. Reduce indoor use by an additional 100,000 gallons per day (gpd) over past program savings.(Chapter 5)

Strategies

1. Continue to implement flow reduction programs through partnership with the LOTT Clean Water Alliance and Cities of Lacey and Tumwater for single-family, multi-family and industrial/commercial/institutional (ICI) customers who receive LOTT sewer service.
2. Continue to implement water-saving programs for residential City water customers who are on septic systems and therefore cannot participate in the LOTT programs.
3. Continue outreach to raise awareness of the importance of water use efficiency.

Objective 3B. Reduce outdoor use by an additional 5 percent over past program savings. (Chapter 5)

Strategies

1. Continue to implement outdoor water use reduction programs for residential customers.
2. Continue to implement the Efficient Irrigation Hardware Rebate Program for ICI customers.
3. Continue outreach to raise awareness of the importance of water use efficiency.

Objective 3C. Maintain water loss below 10 percent of production. (Chapter 5)

Strategies

1. Continue to monitor water loss in the system annually, as required by the DOH, by evaluating production, authorized consumption (both metered and unmetered) and resulting Distribution System Leakage (DSL).
2. Continue to work closely with the Olympia Fire Department and surrounding fire districts to get accurate estimates of water used for fire suppression, fire flow testing, sprinkler flushing and training conducted off-site.
3. Continue to work closely with the Utility's Operations & Maintenance section to monitor water loss due to field use, main breaks and leaks, as well as expanding leak detection efforts.
4. If the water system exceeds the DSL standard, develop and implement a Water Loss Control Action Plan as required by DOH.

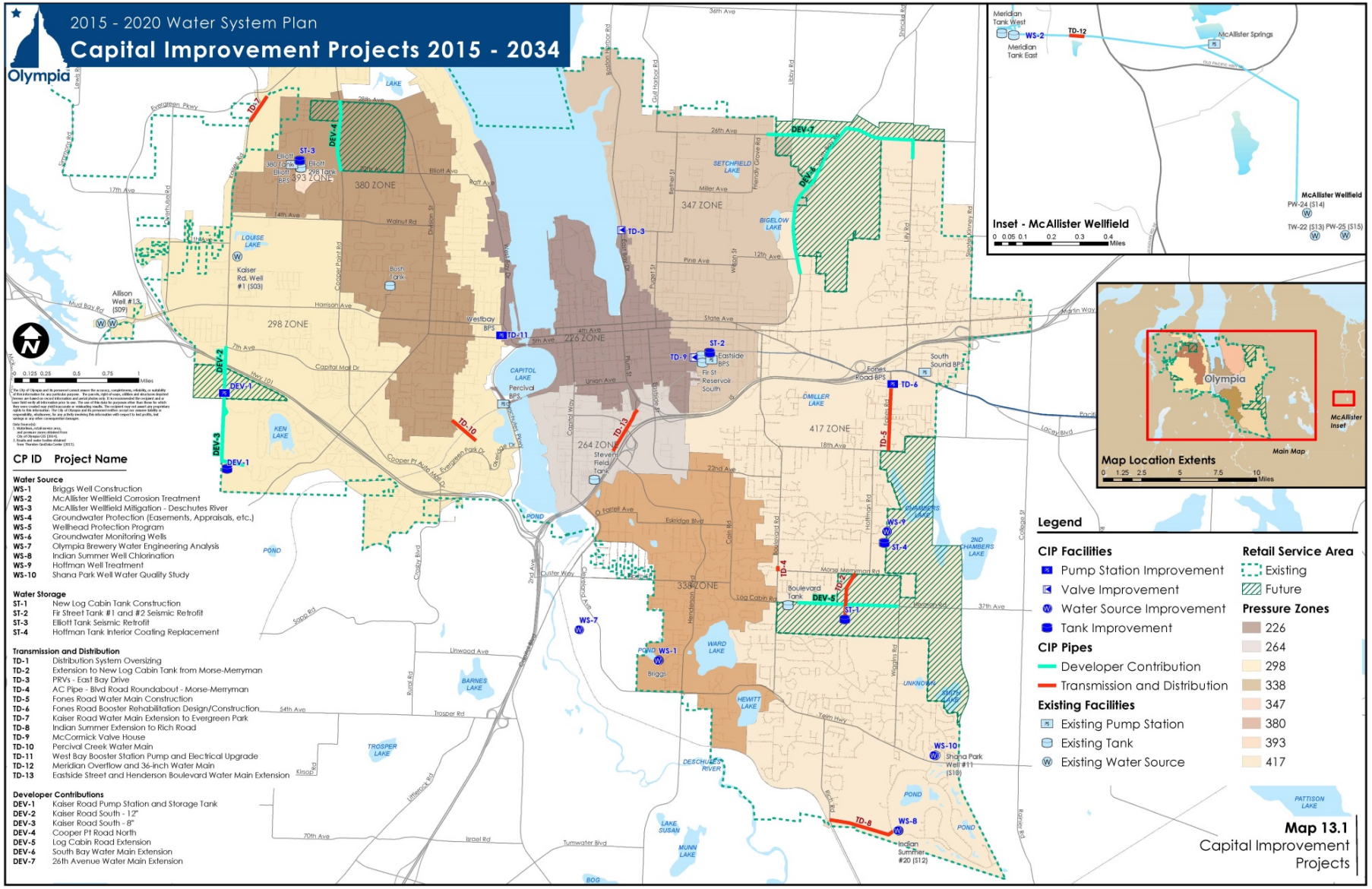
Capital Improvements Plan

Olympia™

Table 13.2 2015-2034 Capital Improvement Program

Project Schedule and Costs (in thousands of dollars) [1]														
Code	Project Name	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Subtotal 2015-2024	Subtotal 2025-2034	Total 2015-2034
Water Source (WS)														
WS-1	Briggs Well Construction									2,250		2,250	0	2,250
WS-2	McAllister Wellfield Corrosion Treatment		2,475	825								3,300	0	3,300
WS-3	McAllister Wellfield Mitigation - Deschutes River	200	142	100	100	100	100	100	100	100	100	1,142	1,000	2,142
WS-4	Groundwater Protection (Easements, Appraisals, etc.)		11	4	11	4	11	4				45	0	45
WS-5	Wellhead Protection Program			188	175	38						400	800	1,200
WS-6	Groundwater Monitoring Wells	75	138	188	200	50						650	0	650
WS-7	Olympia Brewery Water Engineering Analysis	38	13				38	13				100	0	100
WS-8	Indian Summer Well Chlorination		113	38								150	0	150
WS-9	Hoffman Well Treatment								1,875	625		2,500	0	2,500
WS-10	Shana Park Well Water Quality Study		113	38								150	0	150
Water Storage (ST)														
ST-1	New Log Cabin Tank Construction	6,750	2,250									9,000	0	9,000
ST-2	Fir Street Tank #1 and #2 Seismic Retrofit			750	250							1,000	0	1,000
ST-3	Elliott Tank Seismic Retrofit			938	313							1,250	0	1,250
ST-4	Hoffman Tank Interior Coating Replacement			434	145							578	0	578
Transmission and Distribution (TD)														
TD-1	Distribution System Oversizing	27	27	27	27	27	27	27	27	27	27	270	270	540
TD-2	Morse-Merryman Extension to New Log Cabin Tank	900	300									1,200	0	1,200
TD-3	PRVs - East Bay Drive					185	62					247	0	247
TD-4	AC Pipe - Blvd Road Roundabout - Morse-Merryman		585	195								780	0	780
TD-5	Fones Road Water Main Construction						1,725	575				2,300	0	2,300
TD-6	Fones Road Booster Replacement Design/Construction	813	273									1,085	0	1,085
TD-7	Kaiser Road Water Main Extension to Evergreen Park			570	190							760	0	760
TD-8	Indian Summer Extension to Rich Road											0	600	600
TD-9	McCormick Valve House		113	38								150	0	150
TD-10	Percival Creek Water Main	75	325	100								500	0	500
TD-11	West Bay Booster Station Pump and Electrical Upgrade	113	38									150	0	150
TD-12	Meridian Overflow and 36-inch Water Main	113	38									150	0	150
TD-13	Eastside Street and Henderson Boulevard Water Main Extension								900	300		1,200	0	1,200
Operations and Maintenance (OM)														
OM-1	Small Diameter Water Main Replacement	488	500	500	500	500	500	500	500	500	500	4,988	5,000	9,988
OM-2	Asphalt Overlay Adjustments	11	11	11	11	11	11	11	11	11	11	105	105	210
OM-3	Storage Tank Coatings (Interior/Exterior)				225	75	225	75				600	600	1,200
OM-4	Booster Station Upgrade/Rehabilitation			113	150	150	150	38				600	600	1,200
OM-5	AC and Aging Pipe Replacement	375	500	500	500	500	500	500	500	500	500	4,875	5,000	9,875
OM-6	PRV Telemetry (Radio-Based)							38	13			50	0	50
OM-7	Distribution Main Condition Assessment	19	25	25	25	25	25	25	25	25	25	244	250	494
OM-8	Cross Country Mains	19	25	25	25	25	25	6				150	0	150
OM-9	On-site Generator Replacement Plan		56	19	56	19	56	19	56	19		300	225	525
OM-10	Asset Management Program	38	50	50	50	50	50	50	50	50	50	488	500	988
OM-11	Corrosion Control (Aeration) Tower Condition Assessment & Upgrades		19	25	25	25	25	25	25	25	25	219	250	469
OM-13	Water Meter Replacement							375	125			500	0	500
OM-14	Water Meter AMR Radio Replacement							150	50			200	0	200
OM-15	McAllister Wellfield Mitigation - Woodland Creek	38	50	50	50	50	50	50	50	50	50	488	500	988
Reclaimed Water (RW)														
RW-1	Reclaimed Water Infrastructure						188	63				250	0	250
RW-2	Port of Olympia - Eliminate Northern Dead End		38	13								50	0	50
RW-3	Reclaimed Water Filling Stations						75	25				100	0	100
Planning (PL)														
PL-1	Water System Plan						225	75				300	600	900
PL-2	Infrastructure Pre-Design and Planning	16	21	21	21	21	21	21	21	21	21	205	210	415
TOTAL		10,104	8,244	5,780	3,048	1,854	4,088	2,762	4,327	4,502	1,309	46,017	16,510	62,527

1. In September 2014 dollars. Totals of individual years may not equal subtotals, due to rounding.


2015 - 2020 Water System Plan
Capital Improvement Projects 2015 - 2034
Olympia
Inset - McAllister Wellfield
Meridian Tank West
Meridian Tank East
WS-2
TD-12
McAllister Springs
McAllister Wellfield
PW-24 (S14)
TW-22 (S13) PW-25 (S15)
Map Location Extents
Main Map
McAllister Inset
CP ID Project Name
Water Source
WS-1 Briggs Well Construction
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Transmission and Distribution
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TD-7 Kaiser Road Water Main Extension to Evergreen Park
TD-8 Indian Summer Extension to Rich Road
TD-9 McCormick Valve House
TD-10 Percival Creek Water Main
TD-11 West Bay Booster Station Pump and Electrical Upgrade
TD-12 Meridian Overflow and 36-inch Water Main
TD-13 Eastside Street and Henderson Boulevard Water Main Extension
Developer Contributions
DEV-1 Kaiser Road Pump Station and Storage Tank
DEV-2 Kaiser Road South - 12"
DEV-3 Kaiser Road South - 8"
DEV-4 Cooper Pt Road North
DEV-5 Log Cabin Road Extension
DEV-6 South Bay Water Main Extension
DEV-7 26th Avenue Water Main Extension
Legend
CIP Facilities
Pump Station Improvement
Valve Improvement
Water Source Improvement
Tank Improvement
CIP Pipes
Developer Contribution
Transmission and Distribution
Existing Facilities
Existing Pump Station
Existing Tank
Existing Water Source
Retail Service Area
Existing
Future
Pressure Zones
226
264
298
338
347
380
393
417
Map 13.1
Capital Improvement Projects

Next Steps

Submit Draft to WA Department of Health (WDOH)

UAC for recommendation to Council

Land Use and Environment Committee

City Council- briefing, public hearing, adoption

Final review and adoption by WDOH

- Required adoption by June 2016

Questions?

McAllister Wellfield

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