

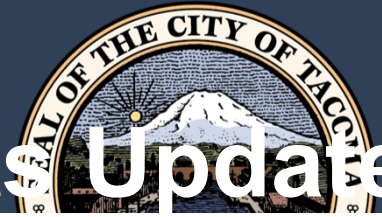
Water System Planning

City of Tacoma | Department of Public Utilities –
Water Division
City Council Study Session
November 20, 2018
ITEM #2

●



5 Water System Documents Updated



Water System Plan

- Overall summary of work throughout the utility

Watershed Management Plan

- Protection of land in the watershed

Water Conservation Plan

- Ongoing measures to reduce demand

Integrated Resource Plan

- Supply and demand analysis through year 2050

Water Shortage Response Plan

- Temporary measures implemented during a drought

2018 Water System Plan



BACKGROUND



TACOMA PUBLIC UTILITIES

The logo for Tacoma Public Utilities, featuring a stylized 'T' and 'C' with water waves.

[Water Home](#)
[For Your Home](#)
[For Your Business](#)
[Water Quality](#)
[Water Source](#)
[Water Supply Outlook](#)
[Green River Watershed](#)
[Ground Water Wells](#)
[Regional Water Supply](#)
[Water System Plan](#)
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WATER SYSTEM PLAN

2018 Water System Plan

Tacoma Water's Comprehensive Water System Plan serves as a tool to assist Tacoma Water in making the best use of available resources in order to provide quality water services and protect the health of its customers.

Tacoma Water is required by the Washington State Department of Health to update its water system plan every ten years. These efforts include stakeholder and public outreach activities.

Public Review Draft Released for Public Comment

The [Public Review Draft of the 2018 Water System Plan](#) is available for public review and comment through June 22, 2018. Comments about the plan can be sent to Jason Moline (see contact information below). The final plan will address comments received on the Public Review Draft. It will then be reviewed by the Public Utility Board and the Tacoma City Council.

[2018 Water System Plan - DRAFT](#)

[Appendix B](#)

[King County Review Requirement Guidelines](#)

[Pierce County Review Requirement Guidelines](#)

[Washington Department of Health Checklist](#)

[Appendix C](#)

[Tacoma Water Capital Improvement Program Needs Assessment](#)

[Appendix D](#)

[2017 Service Interties](#)

[List of Interties](#)

[Appendix E](#)

[Tacoma Water Watershed Management Plan February 2018](#)

[Appendix F](#)

[Water Rights Self-Assessment](#)

[Appendix G](#)

[Storage Capacity Analysis](#)

[Appendix H](#)

- myTPU.org/watersystemplan



Major Plan Enhancements

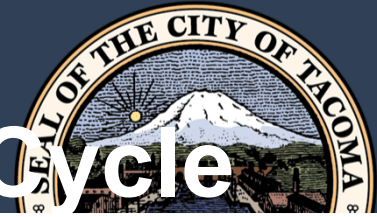


WAC 246-290-100

- Demonstrates the system's capability to meet service levels in compliance with regulations;
- Demonstrate how the system will meet present and future needs;
- Establish eligibility for certain funding opportunities



Sync to Common 10-year Cycle



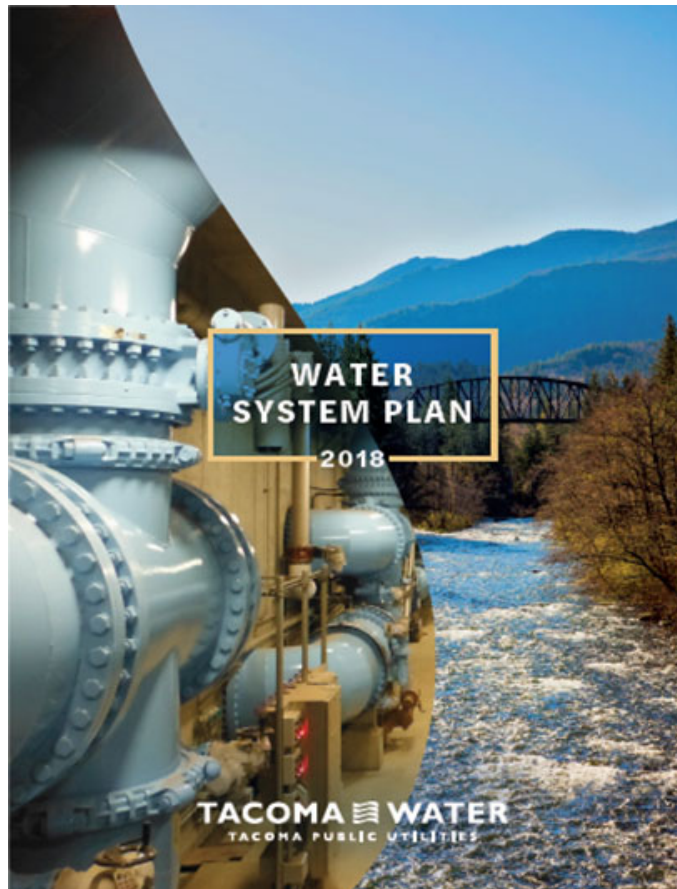
Water System
Plan

• 2018 - 2027

Conservation
Plan and Goal

• 2018 - 2027

● ● ● Chapter Overview



- 12 Chapters providing overview of the planning work we already do
- Referencing and appending existing plans – not rewriting
- Result – a useful compilation rather than a plan for regulatory purposes



Key Changes



- Infrastructure
- Program Advancement
- Tools



Looking to the Future



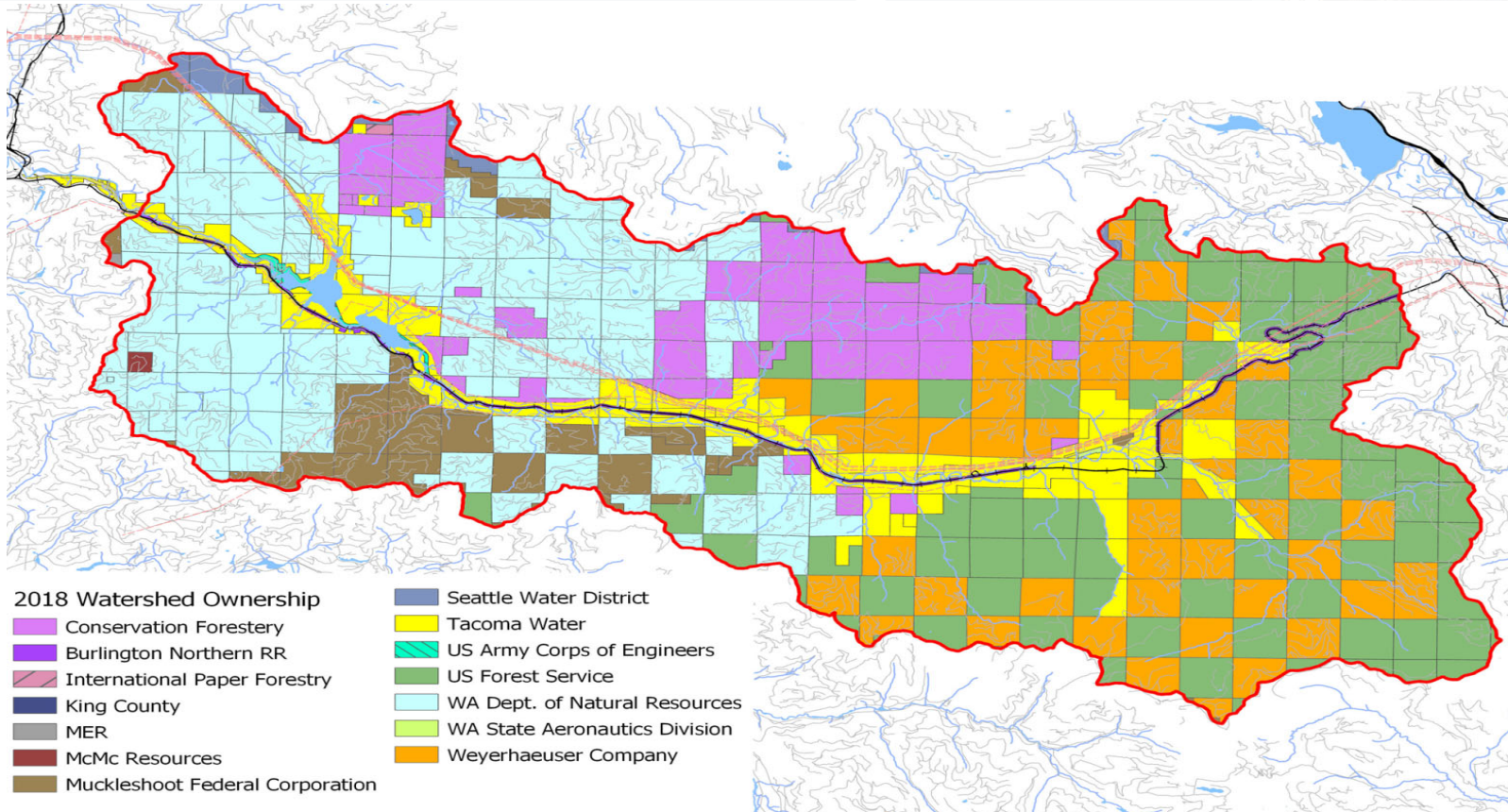
- Areas of new system growth
- Existing aging infrastructure
- Continue to ensure high quality water
- All hazards vulnerability



Watershed Management Plan

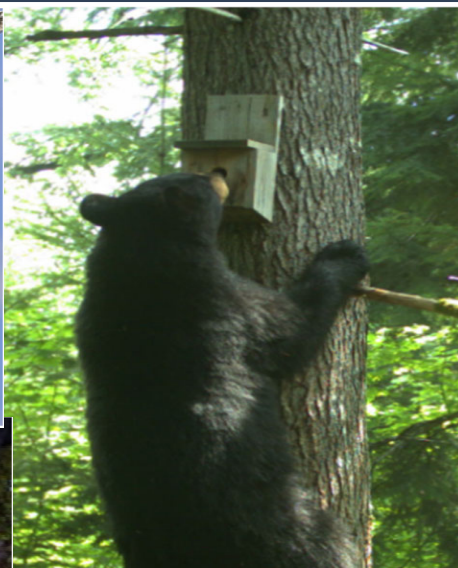


Watershed Management Plan

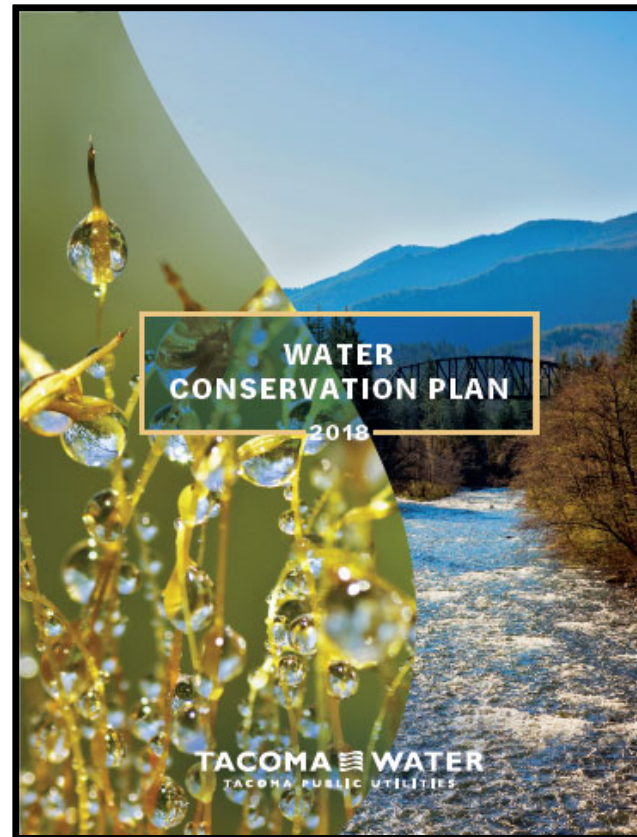




Maintain a Closed Watershed



Water Conservation Plan

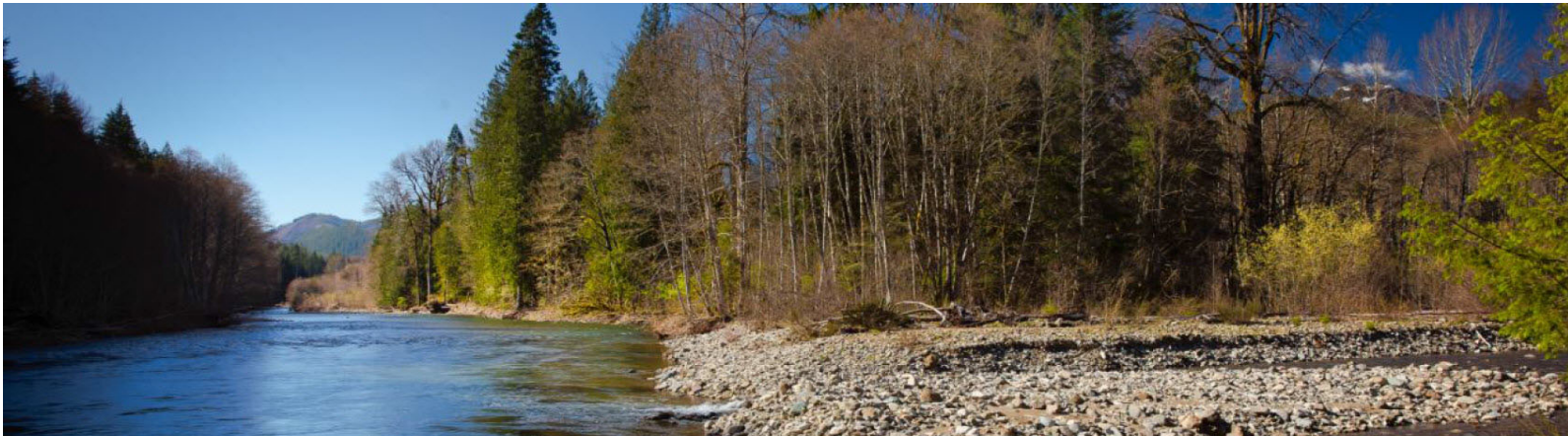


Water Conservation Plan



What drove us to do this?

- Sustainable water use continues to be a high priority
- Our current goal sunset at the close of 2017
- New goal and a new plan to meet it



Process



- Worked with consultant to model each possible measure
- Combined measures into packages with different foci
- Presented packages to water management and Public Advisory Committee





Process



Created a new package using feedback

- Focus on peak
- Add programming for multifamily

Put out for public comment

- Social media and website
- In-person feedback (October 30, 2017)

Goal was created iteratively using multiple forms of feedback

Public feedback review did not require major changes to plan

What We're Keeping



Here are some things we're already doing:

- Single family fixture giveaways
- Commercial kitchen equipment rebates
- Customized commercial, institutional, and industrial customer rebate
- Education and outreach

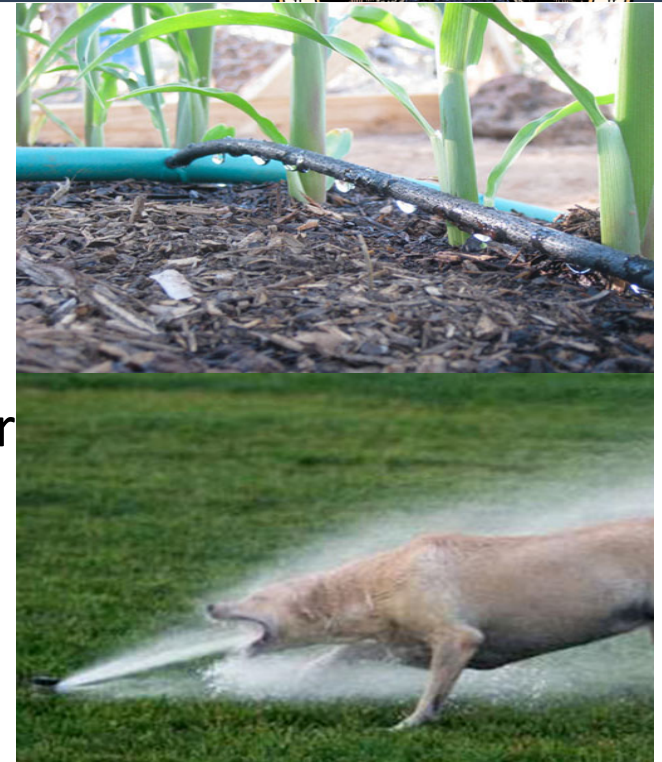


What's New?



Here are some things we're adding:

- Outdoor efficiency kit giveaways for residential customers (soil moisture sensor, rain gauge, hose timer)
- "Smart" irrigation controller rebates for all customers
- Irrigation audits for large commercial systems
- Increase in multifamily customer programs



201718 Conservation Goal



Goal: 6.65% peak (May – October) reduction

Goal will be measured by dividing the water use of the system by our population

- 2017 will be used as the baseline year
- This includes all retail customers, except those using > 1 million gallons/day



Integrated Resource Plan- Why Now?



- Water Supply System Changes
- Surplus water sales
- Supply-side questions & concerns that have emerged
- Demands have declined 30-35% (1980's to present)



A Diverse Water Supply Portfolio





Outreach-Public Advisory Committee



Brought together a group representing a wide range of perspectives to guide the Integrated Resource Plan.

Goals for Public Advisory Committee engagement:

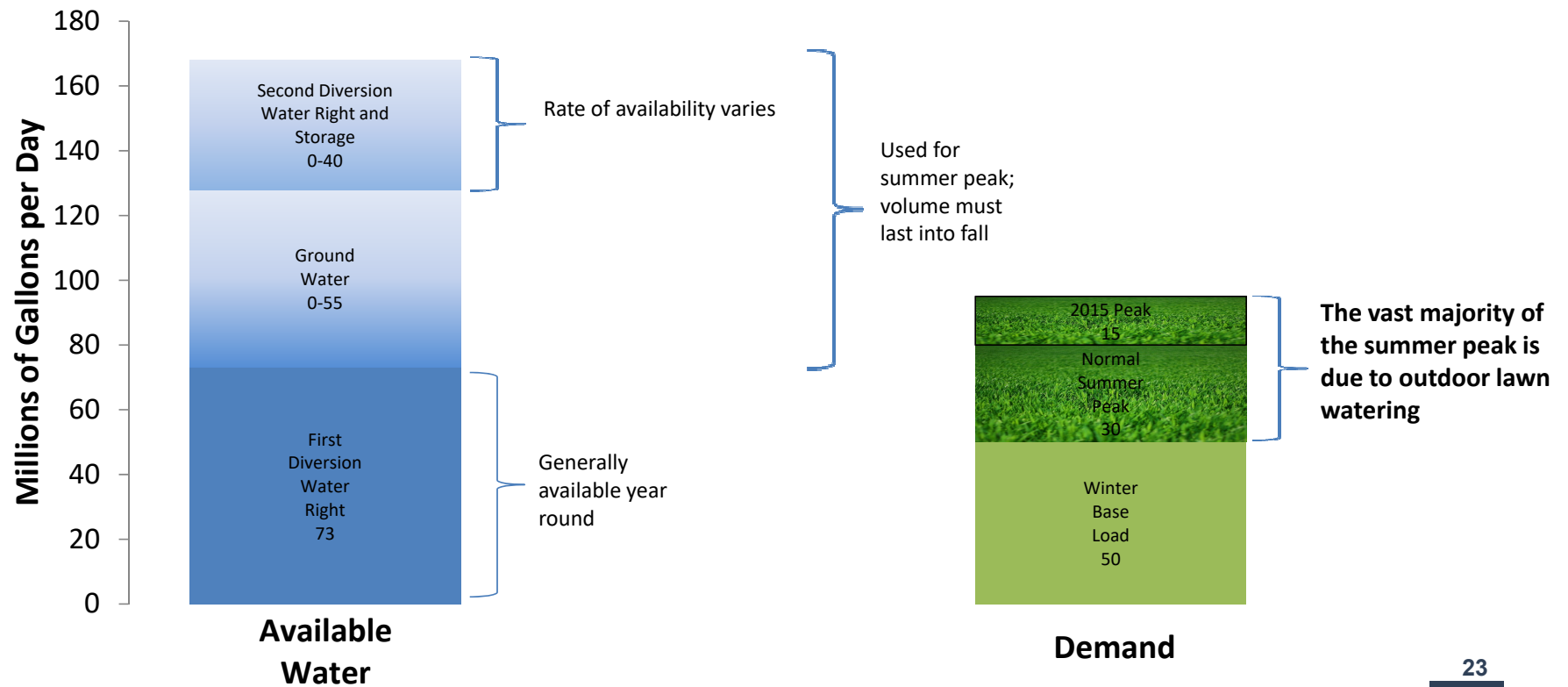
- Increase awareness of supply and demand dynamics
- Solicit informed perspectives on a number of topics
- Increase awareness of current and future management strategies
- Solicit informed perspectives on future investment in conservation

5 meetings

- Conservation program alternatives
- Future resource alternatives
- Resource adequacy standard
- Develop future scenarios



Summary Comparison





IRP Conclusions



- Resource Adequacy Standard: Water sources and systems will be sufficient to meet demands such that mandatory curtailments will occur not more than once in 25 years, as a long term average
- We have plenty of water in all but the most stressed situations (which don't occur very often)
- The remedy of very infrequent voluntary or mandatory curtailment is very effective mitigation.

Water Shortage Response Plan



Water Shortage Response Plan



Demand Side Solutions

- Limit peak summer demand – outdoor irrigation and lawn watering



Supply Side Solutions

- Pump Eagle Lake
- Start seldom-used wells
- Buy from neighbors
- Request Partner storage



Water Shortage Response Plan



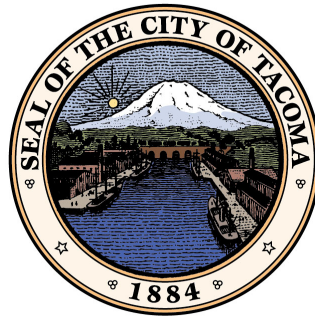
- The revised plan builds on strong regional collaboration.
- A four stage process provides a step-wise approach to conditions as they naturally evolve.
- The plan is a tool to optimally plan for and meet customer demands in an uncertain natural environment; its use represents prudent utility planning and operation.



Next Steps



- Complete publishing of Final documents
- Approval by the Public Utility Board and City Council
- Regulatory Agency approval
- Implement the plans
- Continue public engagement and outreach



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