# Managing Increasing Wildfire Risk in Seattle's Source Watersheds

Julia Munger & Darian Davis

AWWA-PNWS: May 7, 2026

Seattle Public Utilities

City of Seattle

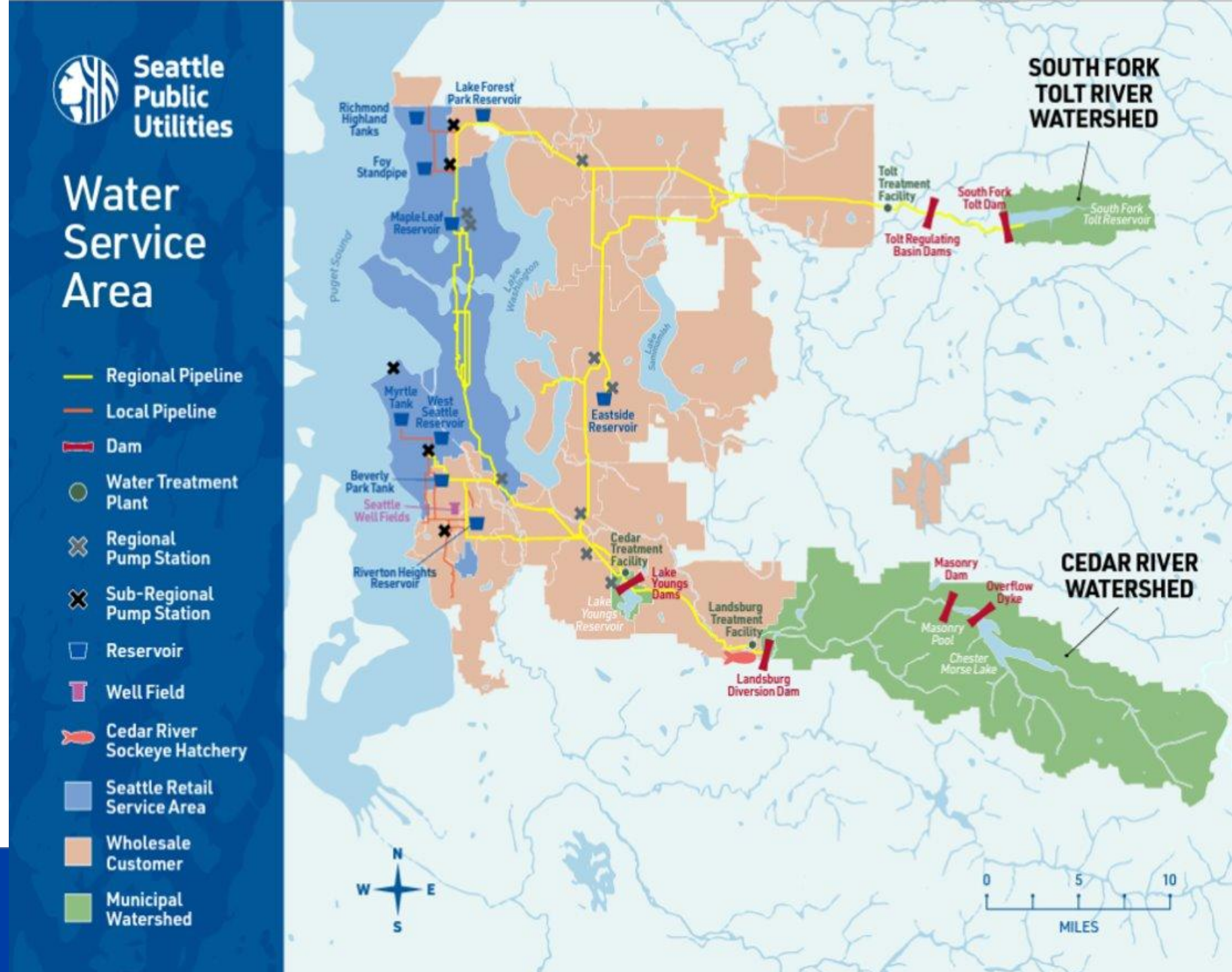
# Today’s topics

- Seattle’s municipal water supply
- SPU’s wildfire prevention and suppression program
- Western Washington forests and wildfire regime
- SPU Wildfire Management Strategy
- Wildfire mitigation actions



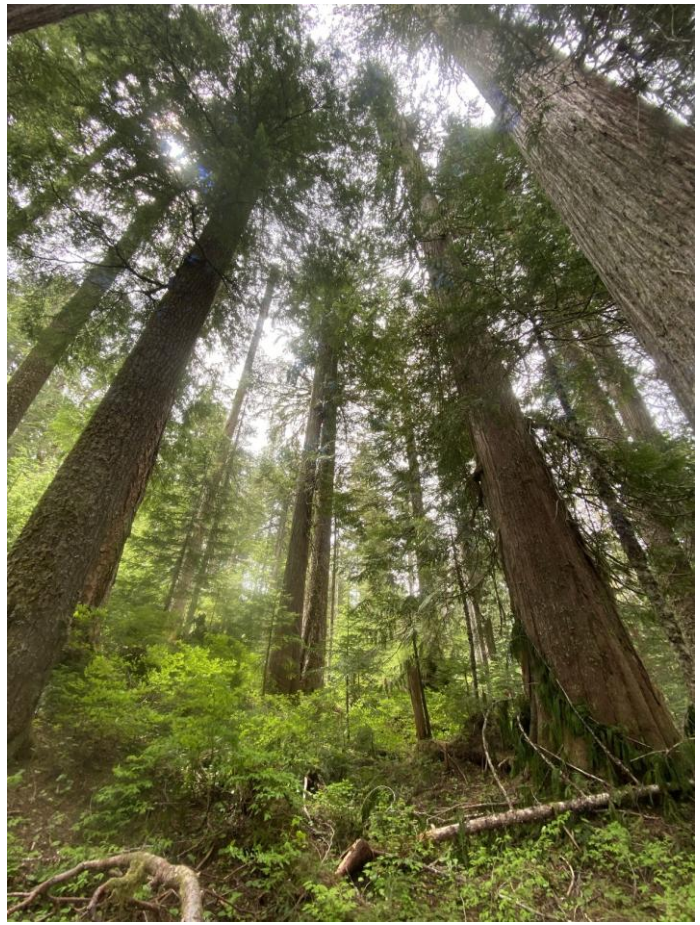
# Seattle's Water Supply System: Beyond the Wildfire Footprint

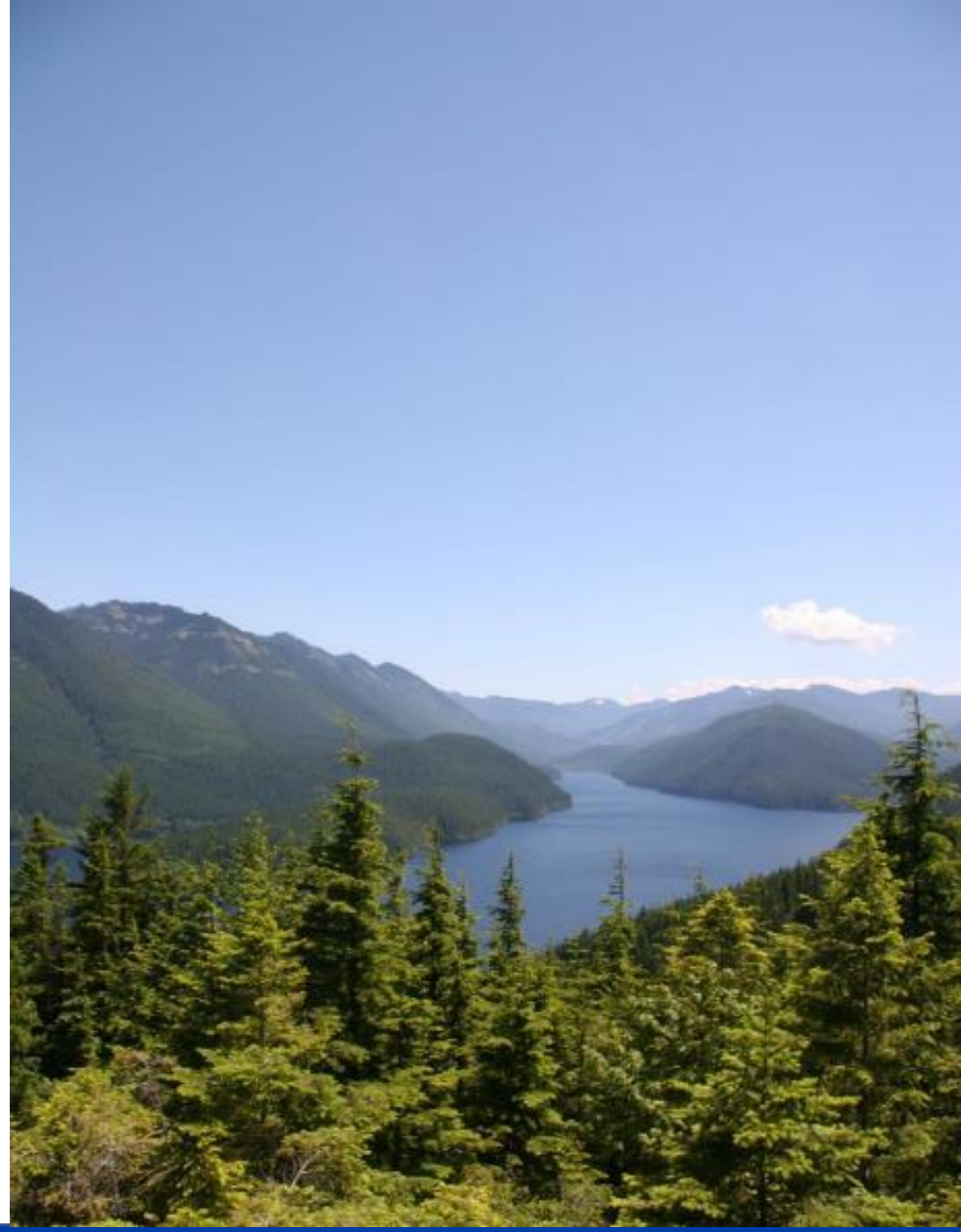
- Serves 1.6 million
- 100,000 acres protected watershed lands
- Cedar ~91,500 acres
  - 99.7% ownership
  - Unfiltered
- Tolt ~8,300 acres
  - 60% ownership
  - Filtered



# Watershed Management Priorities

- Drinking water delivery
- Watershed source protection
- Wildfire risk management
- Forest management
- Habitat protection
- Road network and facilities
- Tribal engagement
- Education
- Information Management
- Recreation (Limited Use Areas)

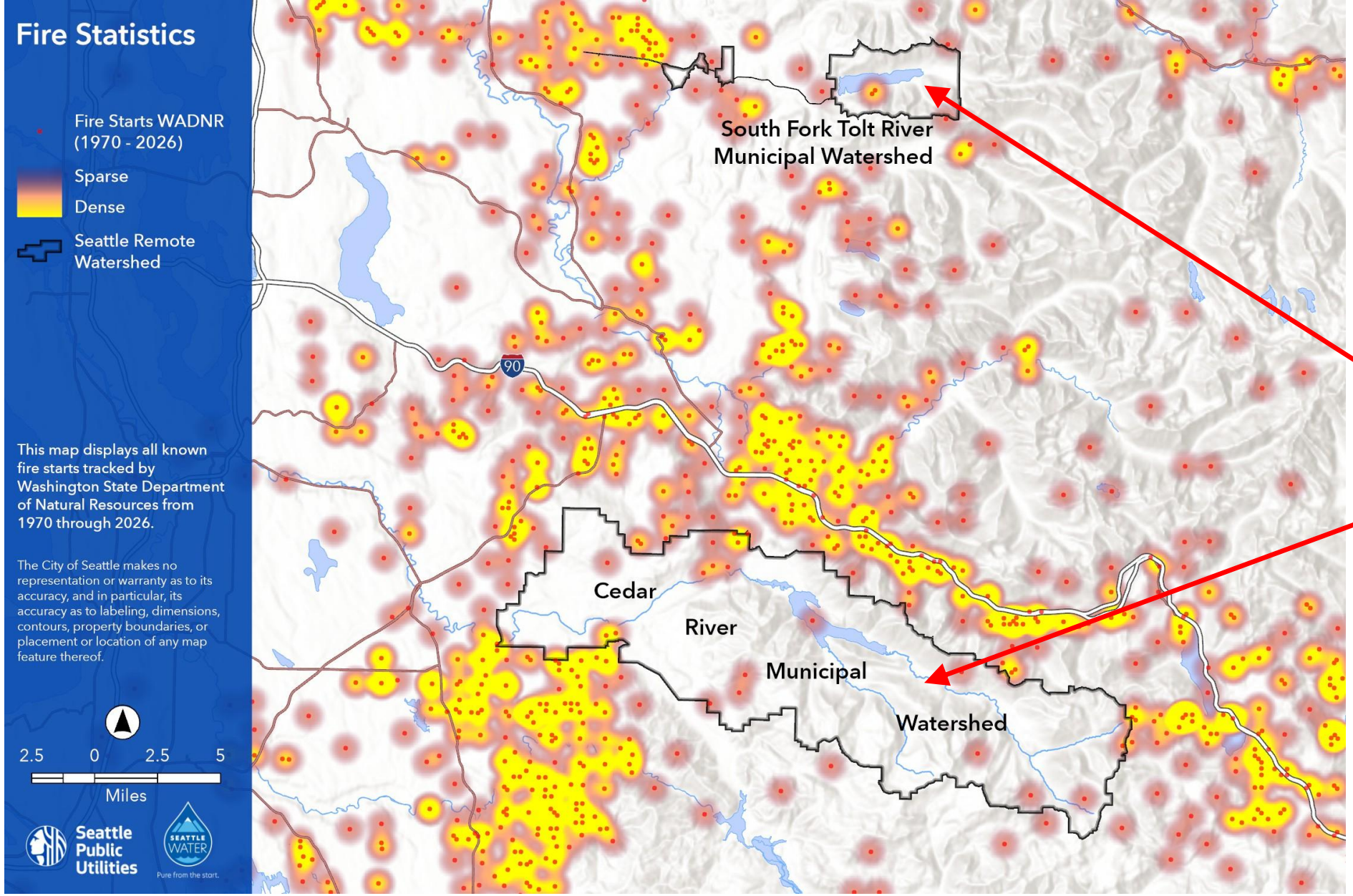




# Wildfire Prevention

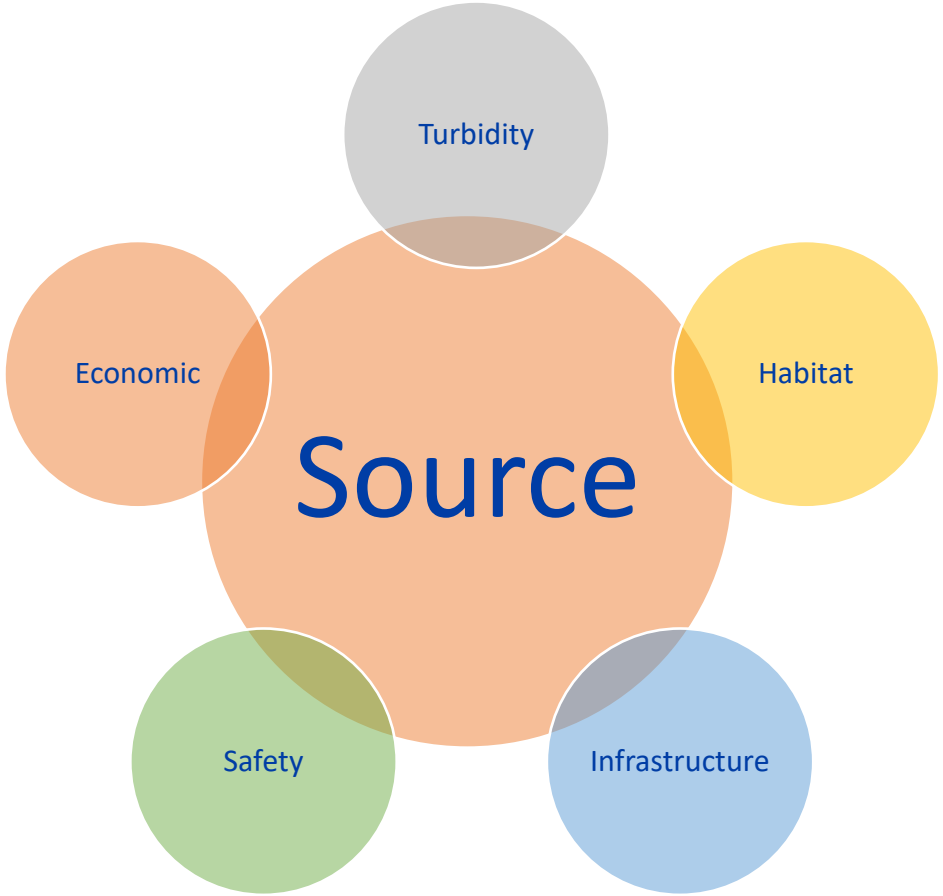
- Closed boundaries
- Active patrols & lightning detection
- Industrial Fire Protection compliance
- Red Flag/ high risk closures
- Agency partnerships and…




Fire Statistics
Fire Starts WADNR (1970 - 2026)
Sparse
Dense
Seattle Remote Watershed
This map displays all known fire starts tracked by Washington State Department of Natural Resources from 1970 through 2026.
The City of Seattle makes no representation or warranty as to its accuracy, and in particular, its accuracy as to labeling, dimensions, contours, property boundaries, or placement or location of any map feature thereof.
2.5 0 2.5 5
Miles
Seattle Public Utilities
SEATTLE WATER
Pure from the start.
South Fork Tolt River Municipal Watershed
90
Cedar River Municipal Watershed

# Wildfire Suppression…why?








# Initial attack (IA) Crew

- Quick aggressive attack the first 24 hours following detection
- Coordinate directly with WADNR
- NWCG qualified crew
- Adjacent property owner IA agreements





# Why IA works for SPU

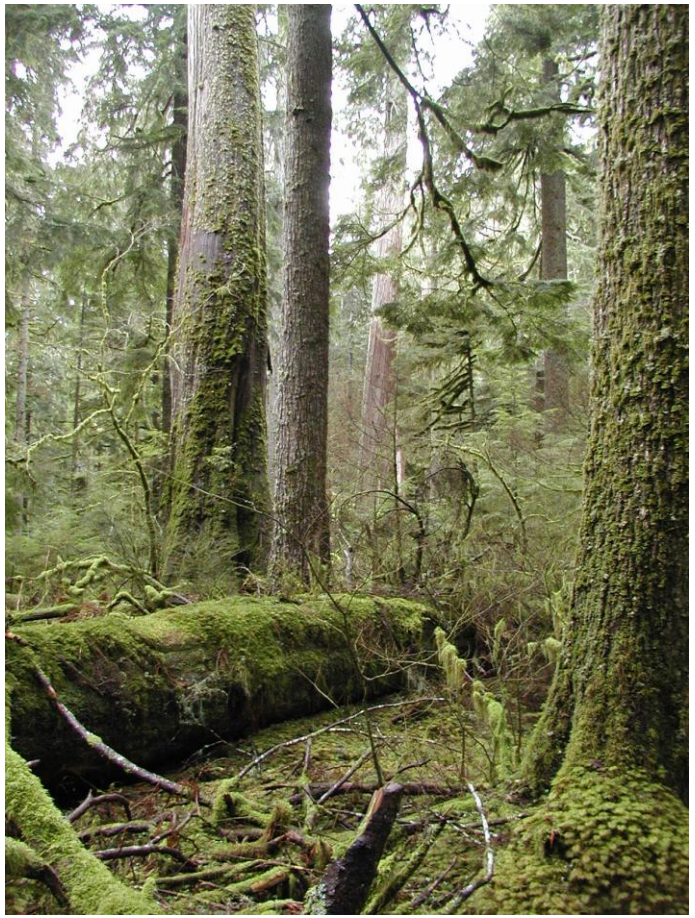
- ✓Assures immediate response
- ✓Minimizes water quality risk
- ✓Maintains control over response strategies and impacts
- ✓Keeps wildfires small
- ✓Efficiently uses onsite resources








# Forests and fire regimes in Washington



- W. Washington
  - Very productive forests
  - Infrequent, high-severity fires

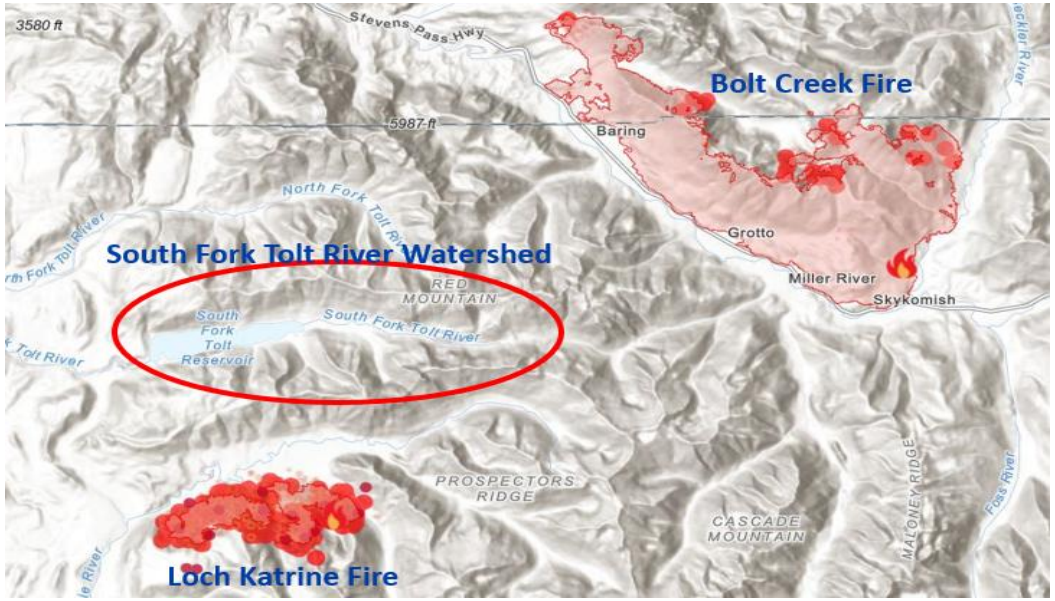
- E. Washington
  - Less productive forests
  - More frequent, less severe fires



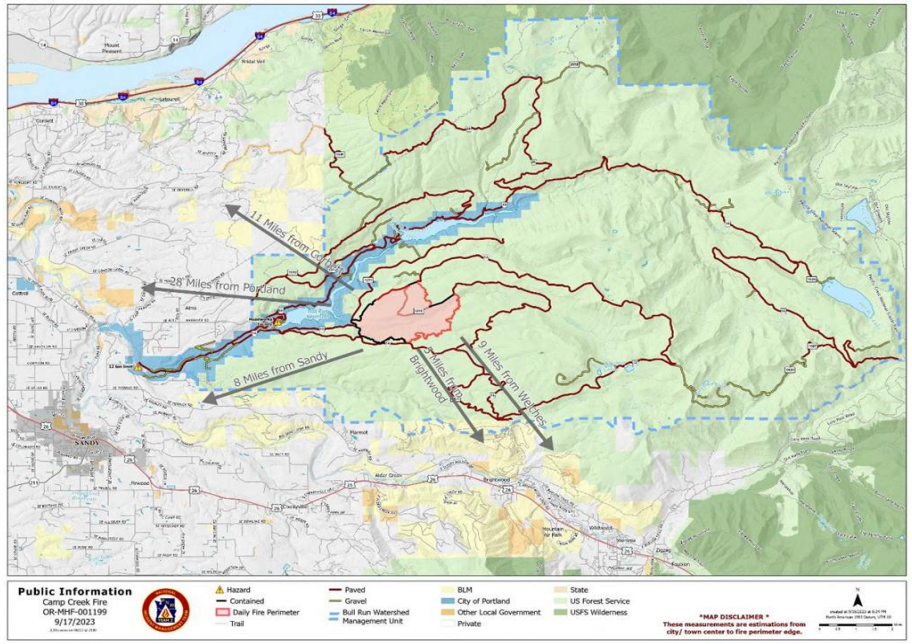
Photo from: https://dnrtrustlands.org/trust-lands/sustainable-forest-management/

# Beyond Prevention & Suppression

- 2022 Bolt Creek and Loch Katrine Fires near Tolt Municipal Watershed

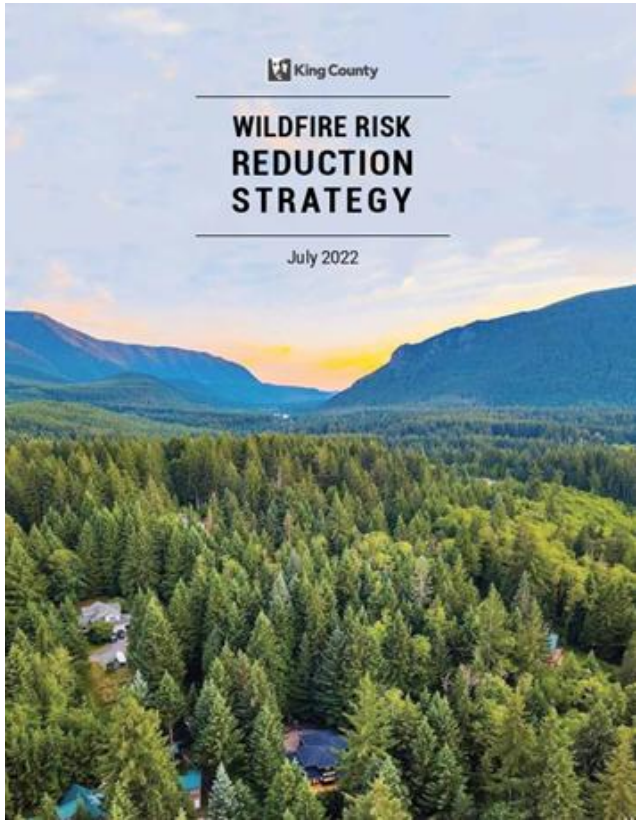



- 2023 Camp Creek Fire in Portland's Bull Run Watershed

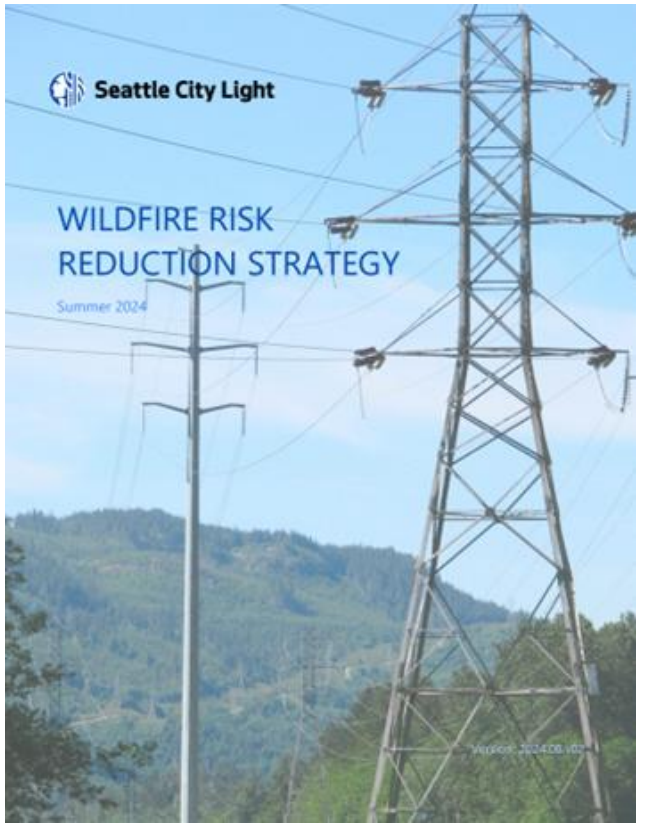



- 2023 Camp Creek Fire in Portland's Bull Run Watershed

# Alignment in Wildfire Planning




King County
Wildfire Risk Reduction Strategy
2022




Seattle City Light
Wildfire Risk Reduction Strategy
2024

# SPU Wildfire Risk Reduction Strategy

***Goal: "To better understand, manage, and respond to wildfire and its impacts in order to minimize risk to water quality, water supply infrastructure, and natural resources in Seattle's watersheds."***



**Objective 1:** Maintain and build on current practices of wildfire prevention and suppression to effectively manage the risk of wildfire.



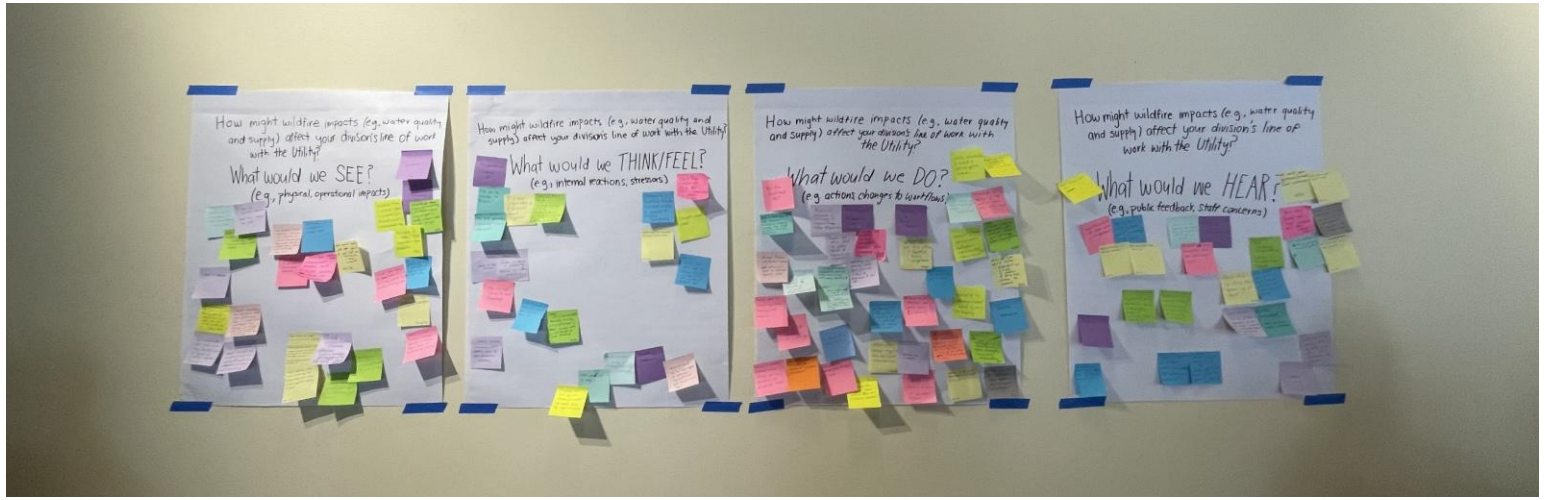
**Objective 2:** Understand changing risks of wildfire under projected climate change conditions and its effects on watersheds, water supply, and water quality.



**Objective 3:** Identify and prioritize actions for pre-wildfire mitigation and post-wildfire recovery.

# Action Planning

- November 2024 Wildfire Workshop
- Steering Committee review of workshop input
- Develop list of 5-year actions
- Approval to proceed by SPU Executives








# Objective 1

*Build on current practices of prevention and suppression to effectively manage the risk of wildfire.*

- Plan for long-term fire crew staffing
- Secure assets and resources for wildfire suppression activities
- Continue engagement with Tribes and agency partners on wildfire management

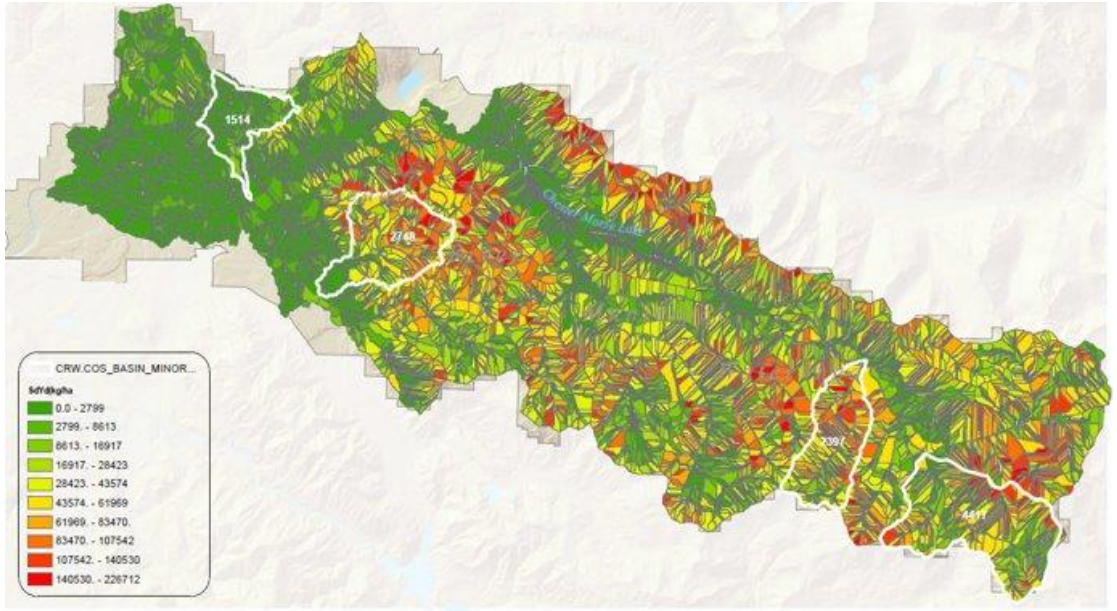




# Objective 2

*Understand changing risk of wildfire under projected climate change conditions and its effects on watersheds, water supply, and water quality.*

- Develop communication tools
- Model water quality impacts from wildfire
- Learn from fires in similar environments




Modeling wildfire impacts in our watersheds

# Objective 3

*Identify and prioritize actions and strategies for pre-wildfire mitigation and post-wildfire recovery.*

- Protect watershed assets with defensible space
- Manage potential fuels by targeting noxious weeds and forest slash for removal
- Coordinate right-of-way management
- Train for post-wildfire response



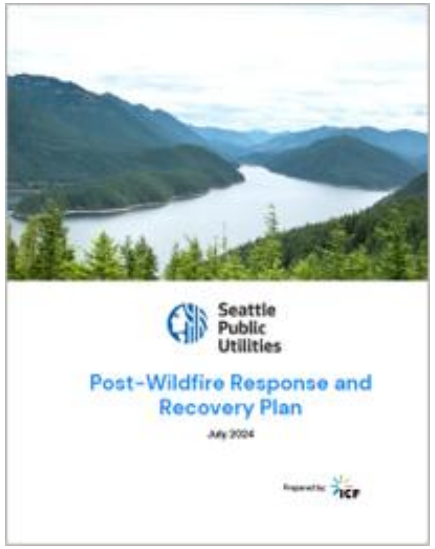
Rehabilitate burned areas

# Actions Underway

- Engaging with Land Managers
- Controlling noxious weeds
- Modeling wildfire impacts
- Learning from other fires
- Implementing defensible space
- Developing Post-Wildfire Response & Recovery Plan



Learn from other fires in the Pacific Northwest




Post-wildfire response planning



Defensible space vegetation management at critical infrastructure

# Questions?



Bolt Creek Fire plume from South Fork Tolt Dam, looking east
Photo courtesy of Brooke Pennock, 9/10/22