



Avista Wildfire Preparedness WUTC – Docket U-210254

May 26, 2021

David James, Wildfire Resiliency Manager

Agenda

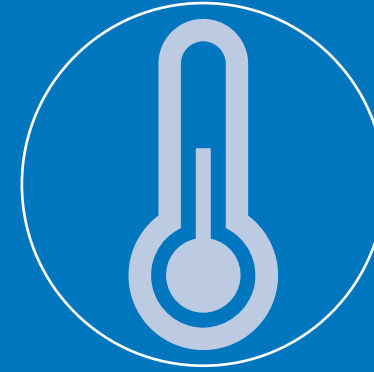


2020 Fire Season
Recap



Avista Wildfire
Plan

- Preparing for 2021
- Partnering
- Quantifying Risk
- 2021 Work Plan



2021 Fire Season
Outlook



2020 Fire Season

	Idaho	Washington	US
# of Fires	944	1,646	58,950
Acres Burned	314,352	842,370	10,122,336
Suppression Costs			\$2.27B

	Washington	US
Structures	377	13,887
Fatalities	1	46
Societal Impact		\$19.9B



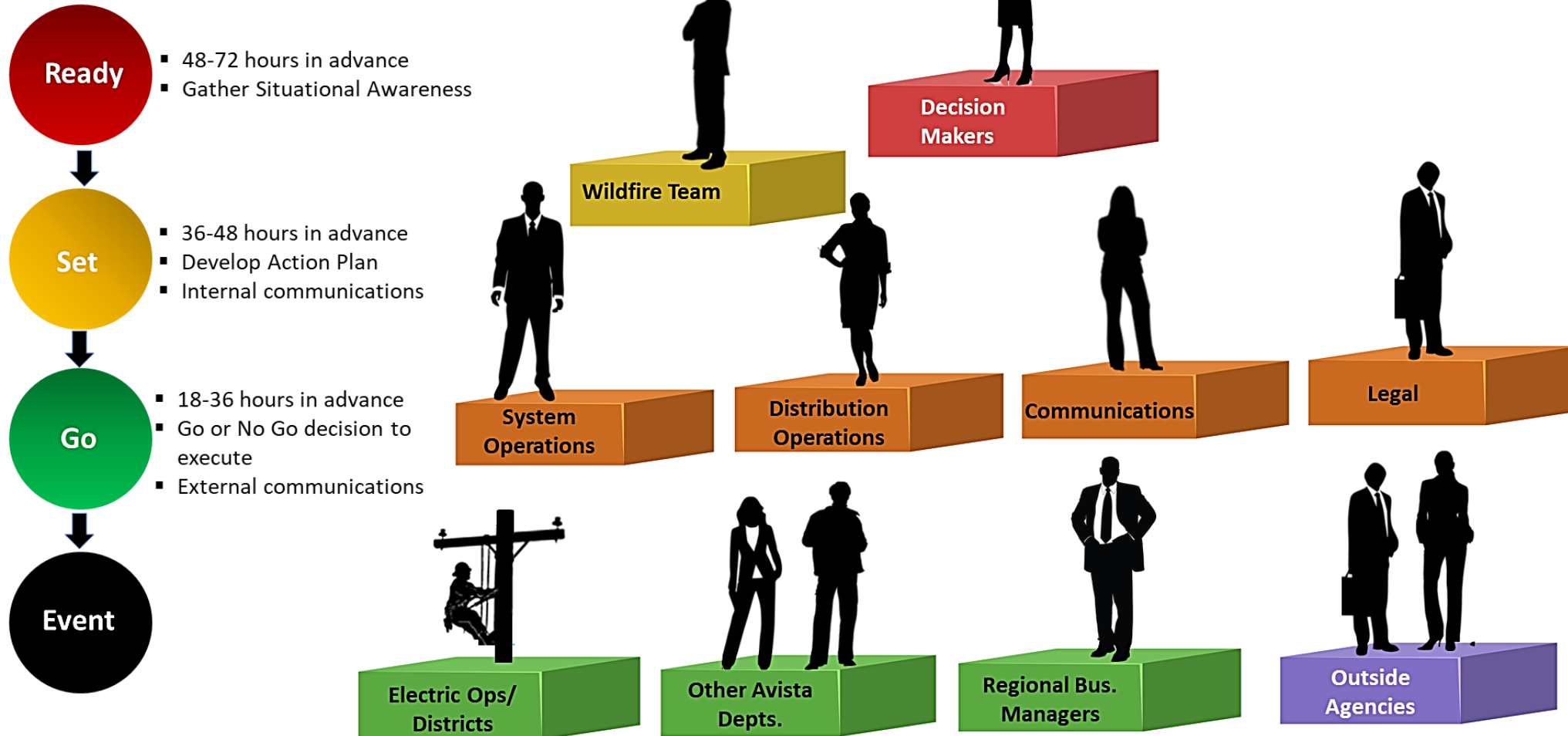
Labor Day – Avista Electric

Malden & Pine City 80% destroyed
 Pearl Hill Fire > 300,000 Acres –
 24 hours

28 Large Fires

Preparing for 2021 Fire Season

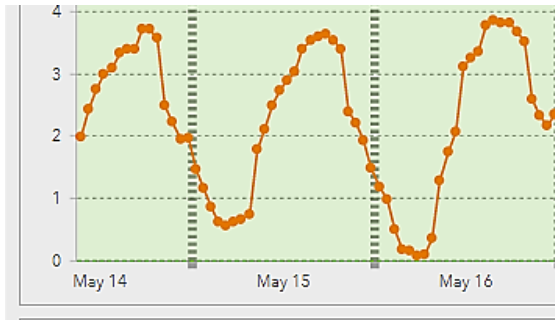
FIRE PLANNING UNIT EOP STRUCTURE



Preparing for 2021 Fire Season

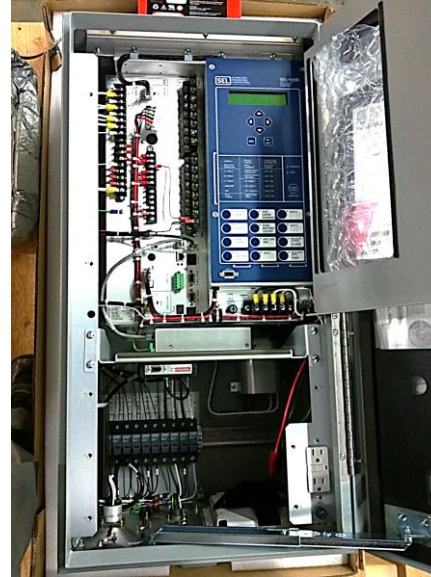
Fire Risk

Feeder	05-13	05-14	05-15	05-16	05-17	05-18	05-19	05-20	05-21	Max
OTH501	4.3	4.9	4.7	5.0	5.8	5.7	5.6	5.3	null	5.8
SOT521	4.2	4.9	4.6	4.9	5.7	5.7	5.4	5.3	null	5.7
RIT731	4.5	4.1	4.3	4.8	5.4	5.4	5.2	5.2	null	5.4
L&R511	3.9	4.5	4.2	4.5	5.3	5.3	5.1	4.8	null	5.3



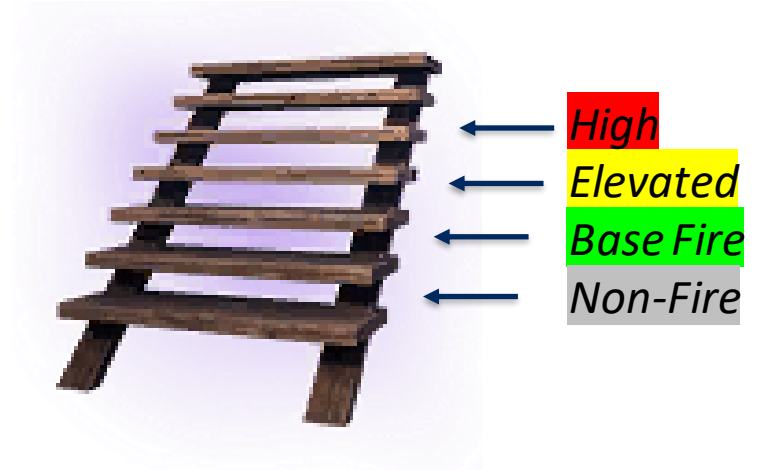
Fire Risk Potential

+



Altering System Protection

=



Dynamic Dry Land Mode

100 of 230 Circuit Reclosers will be fully automated in 2021 (40%)

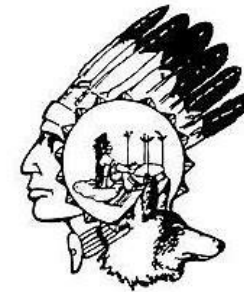


Leveraging Avista's Smart Grid Technology

Partnering with Others



WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES
HILARY S. FRANZ | COMMISSIONER OF PUBLIC LANDS



**Spokane Tribe
of Indians**



Sovereign Nations



State & Federal Fire

Local Fire & EEM



CHELAN COUNTY



**Peer
Utilities**



**Seattle
City Light**



Weather



Validation of Wildfire Risk

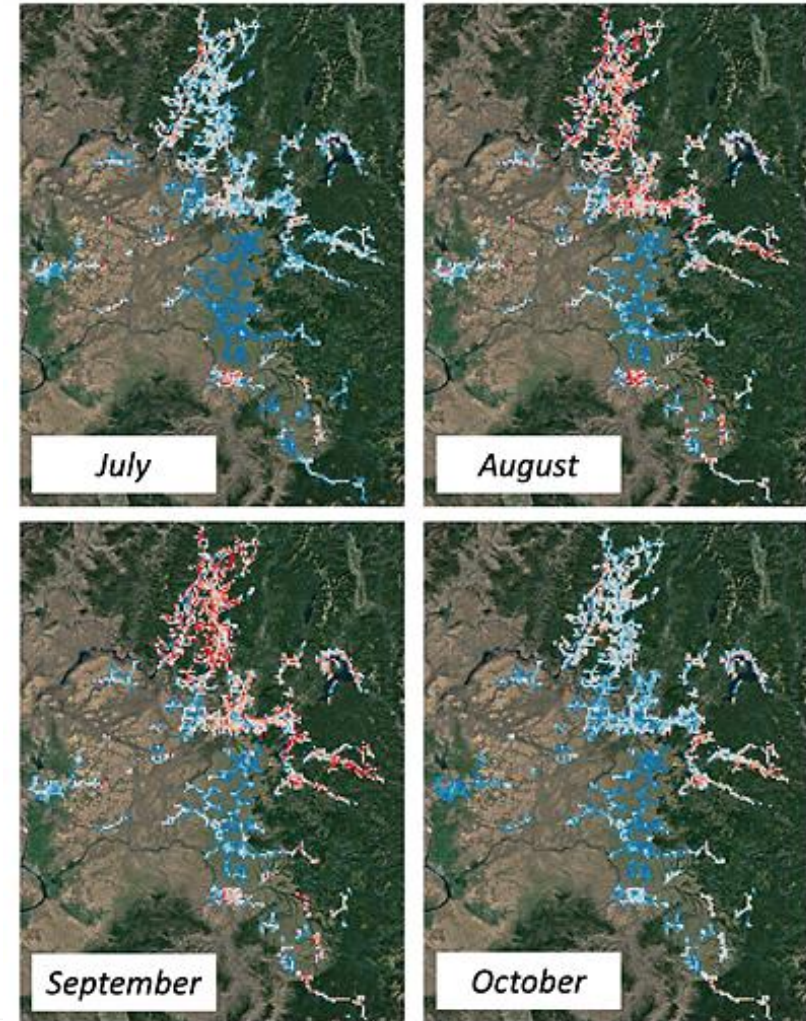


Esource and Avista collaborated to conduct 'big data' wildfire analytics using over 350 attributes

New Data-Driven Models:

- Locally Configured Wildfire Fuel Model
- Avista 'Fire' Outage Event Model

Seasonal Risk Model



Risk Category	2019 Model (% Circuit)	New Wildfire Risk (% Circuit)
Low	40%	50%
Moderate	17%	27%
Elevated	31%	20%
High	12%	3%
Wildfire Fuel Performance	Fair (0.61)*	Very Good (0.88)*

* Wildfire fuel inputs evaluated against >700 local wildfires (2002-2020)

Quantifying the Risk of Transmission Hazard Trees

LiDAR – Light Detection and Ranging

2020

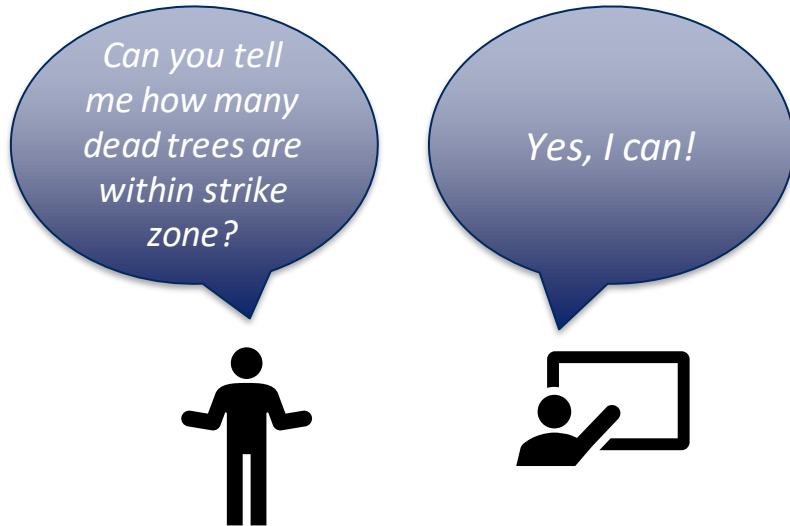
2021



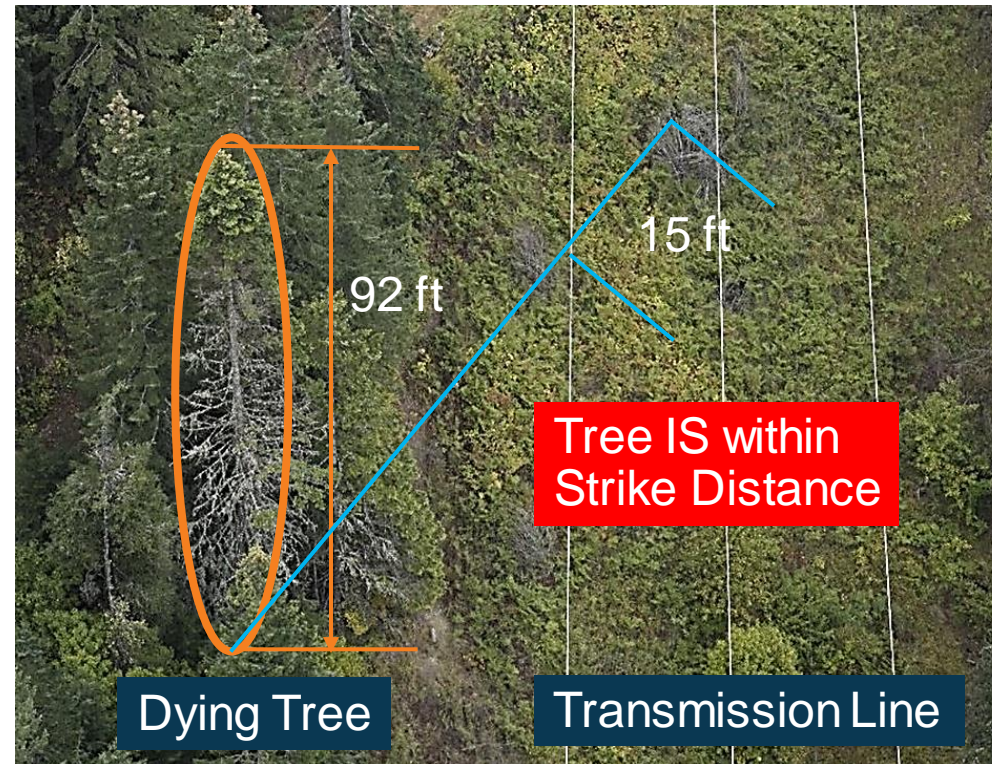
Survey Grade Accuracy +/- 3 centimeters

850 Miles
230 kV Lines

1,143 Miles
115 kV Lines



**Leveraging Technology
with Transmission LiDAR**



**Hazard
Tree Example**

Quantifying the Risk of Distribution Vegetation

Satellite

2020

2021



450 miles
(pilot project)

7,650 miles
100% Distribution

Vegetation Inspection Costs

Manual (Field Based)	\$150/mile
LiDAR (Helicopter)	\$400/mile
Satellite	\$70/mile

Starting in 2021, Avista is contracting with AiDash to capture and analyze Satellite based data on 100% of electric distribution lines.

***Leveraging Technology with
Satellite Imagery***



The 2021 Work Plan

Grid Hardening

- ✓ 204 Distribution Miles
- ✓ 1,821 Steel Transmission Poles
- ✓ 860 Fire Resistant Pole Wraps

Risk Vegetation

- ✓ 100% Distribution Risk Tree
- ✓ Aerial Data Collection
- ✓ Fuel Reduction Partnerships

Situational Awareness

- ✓ GIS Fire Weather V2.0
- ✓ Automated Dry Land Systems
- ✓ Substation SCADA

Operational Tactics

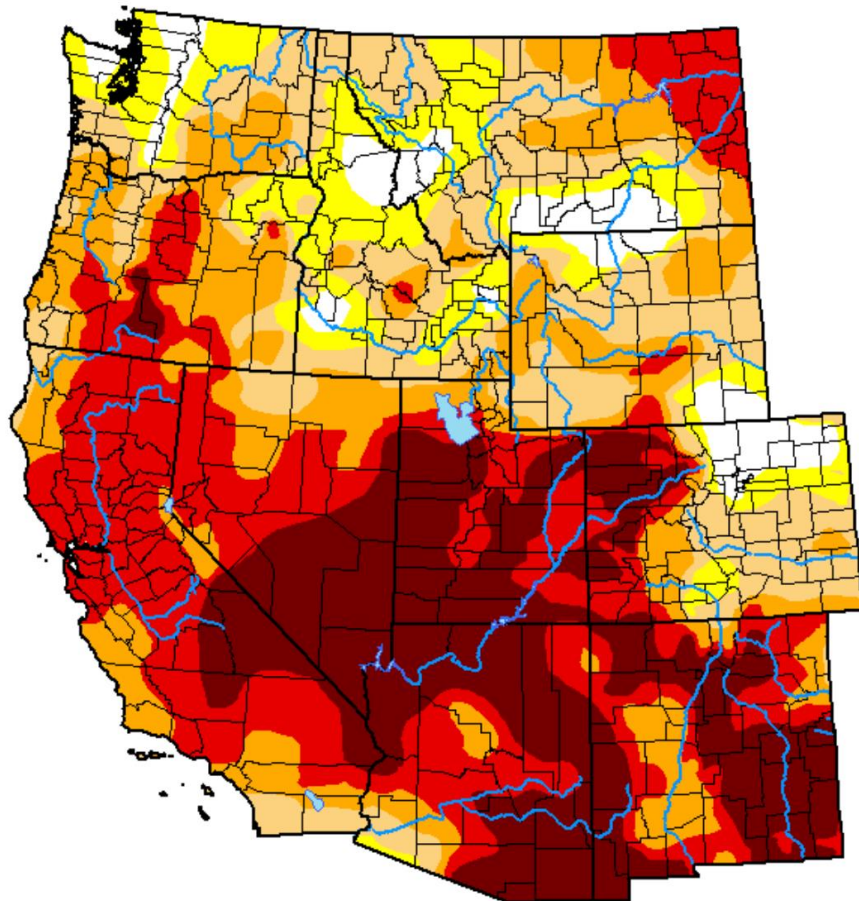
- ✓ Fire Safety Training
- ✓ Expedited Response
- ✓ Weekly Fire Threat Assessment



2021 Fire Season Outlook

U.S. Drought Monitor West

May 11, 2021
(Released Thursday, May. 13, 2021)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	5.13	94.87	84.94	66.25	46.87	22.42
Last Week 05-04-2021	4.25	95.75	84.18	67.07	47.03	21.18
3 Months Ago 02-09-2021	7.05	92.95	79.53	62.87	45.01	21.05
Start of Calendar Year 12-29-2020	11.57	88.43	78.63	65.18	46.49	22.16
Start of Water Year 09-29-2020	8.51	91.49	76.07	54.55	33.11	2.31
One Year Ago 05-12-2020	42.45	57.55	35.71	14.78	2.44	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

David Simeral
Western Regional Climate Center



**San Jose State Fire
Weather Laboratory**

Fire outlook is 'grim'

*Fuel Moisture 50%
of normal*

2015 Drought - May 19

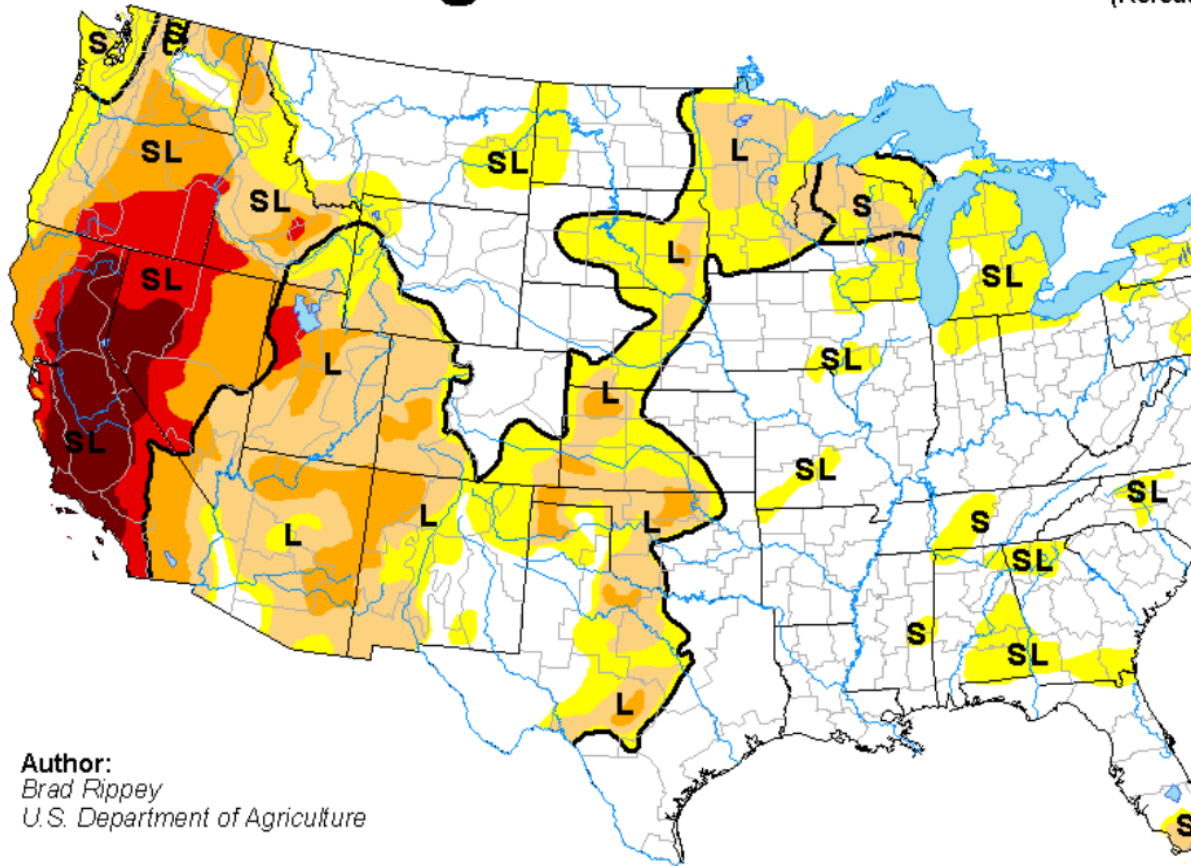
U.S. Drought Monitor

May 19, 2015

(Released Thursday, May 21, 2015)

Valid 7 a.m. EST

**Worst Fire Season
in 16 years**



Western US Wildfires	2015	10 year average
Acres Burned	10 Million	6.6 Million
# of Fires	61,922	77,951

Source: National Interagency Fire Center (NIFC)

S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

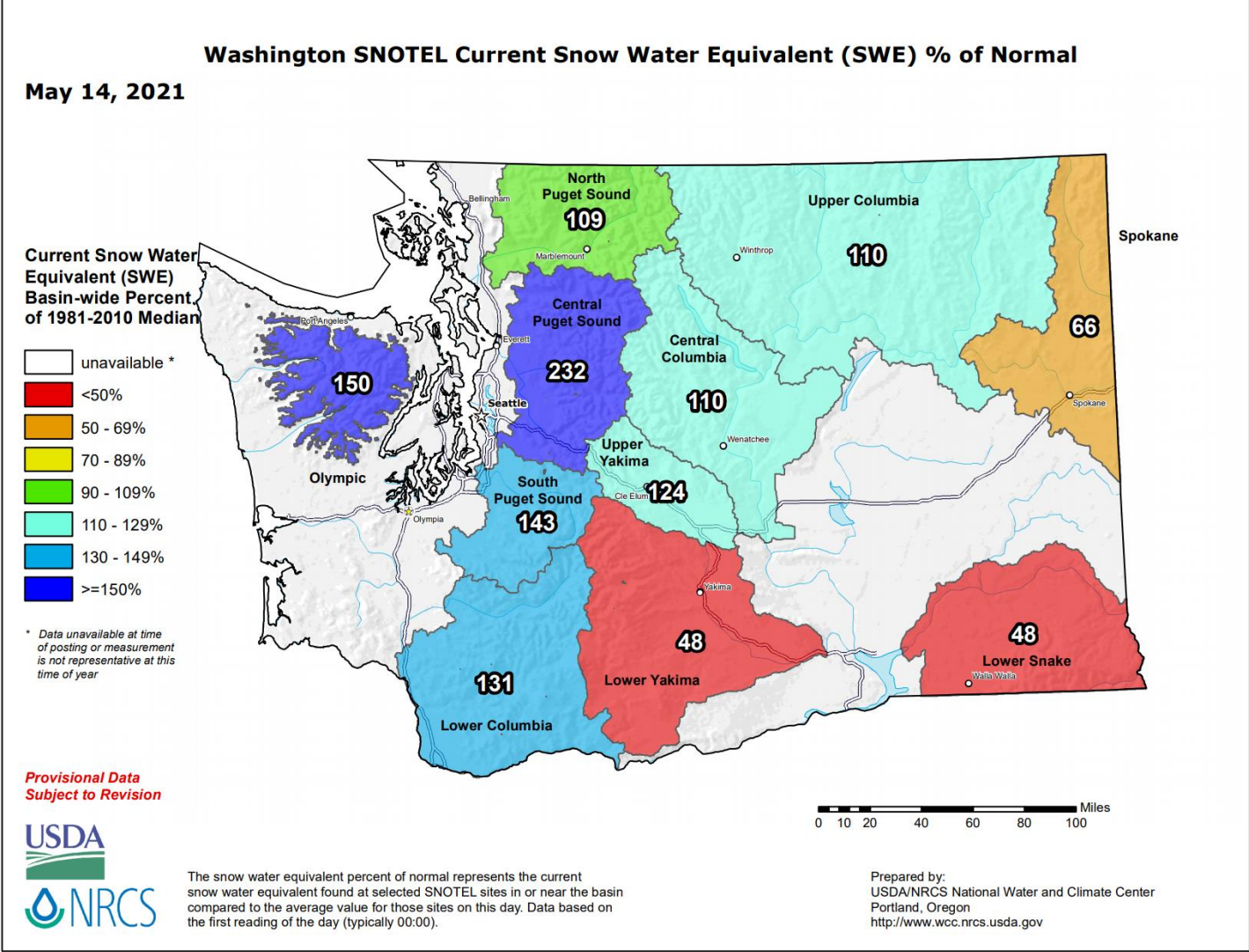
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Author:
Brad Rippey
U.S. Department of Agriculture

Washington SnoTEL May 14, 2021



**March & April 2021 -
Lowest precipitations
levels in Avista History**

Q&A