Swiss Needle Cast Cooperative 2022 Annual Meeting Dec 14, 2022

Members

Starker Forests

Cascade Timber Consulting

Weyerhaeuser

Stimson Lumber Co.

Lewis and Clark Tree Farms LLC Greenwood Resources

US Forest Service

Oregon Department of Forestry

Agenda

- **Swiss Needle Cast Cooperative**
- **9am – 915.** Introductions, SNC and CoF news. Dave Shaw. 2023 SNCC Plans
- **9:15- 930.** New SNCC Leadership: Jared LeBoldus (taking over as Director July 1, 2023), with some of his work on Douglas-fir.
- **9:30-9:45.** Adam Carson, new SNCC FRA. Recently defended MS thesis summary, re: Sudden oak death.
- **SNC in Oregon, Washington and British Columbia:**
- **9:45-10:00.** 2022 SNC Oregon Aerial Detection Survey Results and other activities: Gabi Ritokova ODF
- **10:00-10:30.** 2022 SNC Washington ADS and Plot results: Rachel Brooks, WA DNR
- **10:30-10:45.** 2022 SNC in British Columbia; updates: David Rusch, British Columbia, Ministry of Forests.

- **SNC Related**
- **1045-11:15.** Center for Intensive Planted-forest Silviculture work on SNC and Regional Needle Retention. Doug Mainwaring, CIPS, OSU.
- **11:15-11:30.** Nothophaeocryptopus gaeumannii and other fungi in foliage of Douglas-fir. Kyle Gervers and Posy Busby, OSU
- **11:30-11:45.** Summary of Oregon Forest Health ISSUES detected by ADS in 2022. Danny DePinte, FHP ADS Region 6 (OR, WA).
- **Noon – 130 Business Lunch**

2023

- New Director: Jared LeBoldus
  - Begins July 2023
- New FRA: Adam Carson
  - Begins January 2023
- Gabi Ritokova will still work with SNCC .01 fte until July 2023

Projects for 2023

- Install new Cascades monitoring plot network ~ 45 plots.
  - ODF, Weyerhaeuser, CTC
- Fall 2023
  - Begin re-measurement of SNC Coastal Plot Network
- Weather Stations
- Spore dispersal

Oregon State University Extension Service

Silvicultural Decision Guide for Swiss Needle Cast in Coastal Oregon and Washington

Gabriela Ritóková, David C. Shaw and Doug Mainwaring

Swiss needle cast, a foliage disease caused by the native pathogenic fungus *Nothophaeocryptopus gaeumannii* (formerly *Phaeocryptopus gaeumannii*), has emerged as a significant disease of Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*) in the coastal Pacific Northwest since the 1990s. Swiss needle cast symptoms include chlorotic (yellowish) foliage, low needle retention, thin crowns and reduced tree growth (Figure 1). The fungus occurs wherever its only host, Douglas-fir, is grown. The disease, however, is only noticeable when the fungus causes significant defoliation of 2- and 3-year-old needles. This is an important point for managers — the fungus may be present and yet have no effect on Douglas-fir productivity.

Nothophaeocryptopus gaeumannii lives inside the needles of Douglas-fir and only impacts needle function when fungal fruiting bodies (called pseudothecia) emerge into and plug the stomates (air pores on the underside of a needle), blocking gas exchange (Figure 2). When too many of the stomates on a needle get plugged, the needle dies and is cast (dropped) from the branchlet.

CONTENTS

Available at: https://extension.oregonstate.edu/pub/em-9352

Journal Publications for 2022

frontiers in Forests and Global Change

ORIGINAL RESEARCH
published: 25 February 2022
doi: 10.3389/ffgc.2021.756678

Led by Canadians

Genetic Lineage Distribution Modeling to Predict Epidemics of a Conifer Disease

Naomie Y. H. Herpin-Saunier[1,2], Kishan R. Sambaraju[1,2], Xue Yin[3], Nicolas Feau[3,4], Stefan Zeglen[5], Gabriela Ritokova[6], Daniel Omdal[7], Chantal Côté[2] and Richard C. Hamelin[1,3]*

frontiers in Forests and Global Change

ORIGINAL RESEARCH
published: 11 February 2022
doi: 10.3389/ffgc.2022.743039

Led by Sky Lan

Distribution of a Foliage Disease Fungus Within Canopies of Mature Douglas-Fir in Western Oregon

Yung-Hsiang Lan[1], David C. Shaw[1], E. Henry Lee[2] and Peter A. Beedlow[2]*

[1] Department of Forest Engineering, Resources, and Management, Oregon State University, Corvallis, OR, United States,
[2] U.S. Environmental Protection Agency, Pacific Ecological Systems Division, Corvallis, OR, United States

Drought in Eastern Oregon

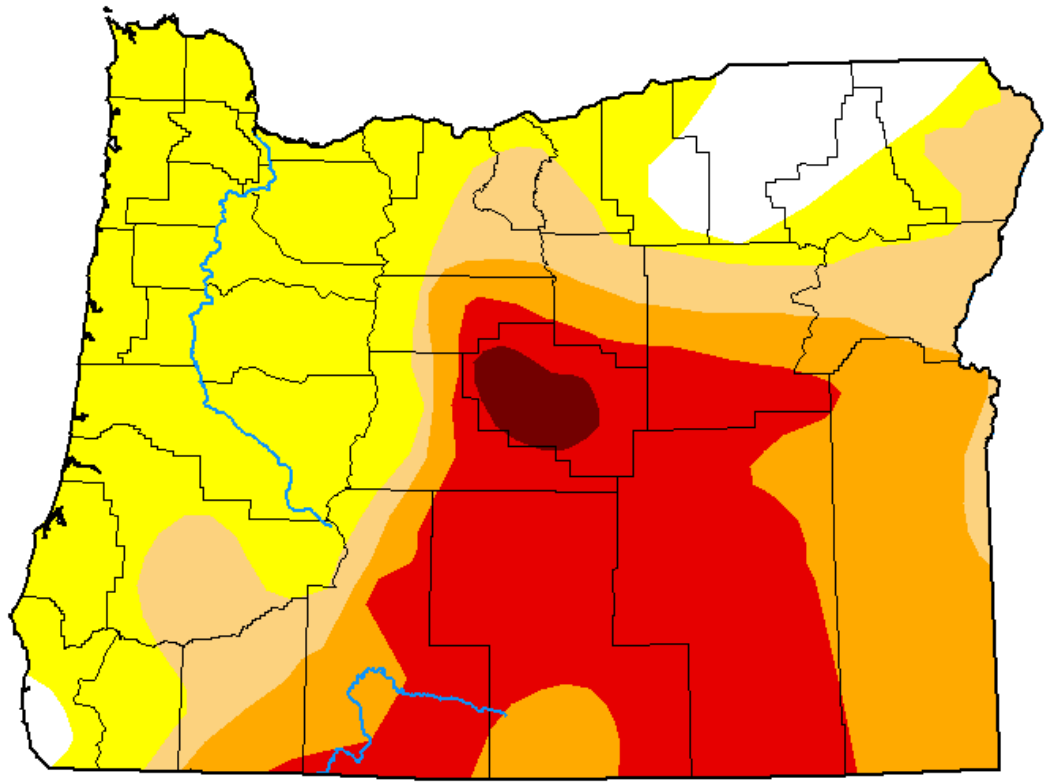
U.S. Drought Monitor

Oregon

December 6, 2022

(Released Thursday, Dec. 8, 2022)

Valid 7 a.m. EST



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

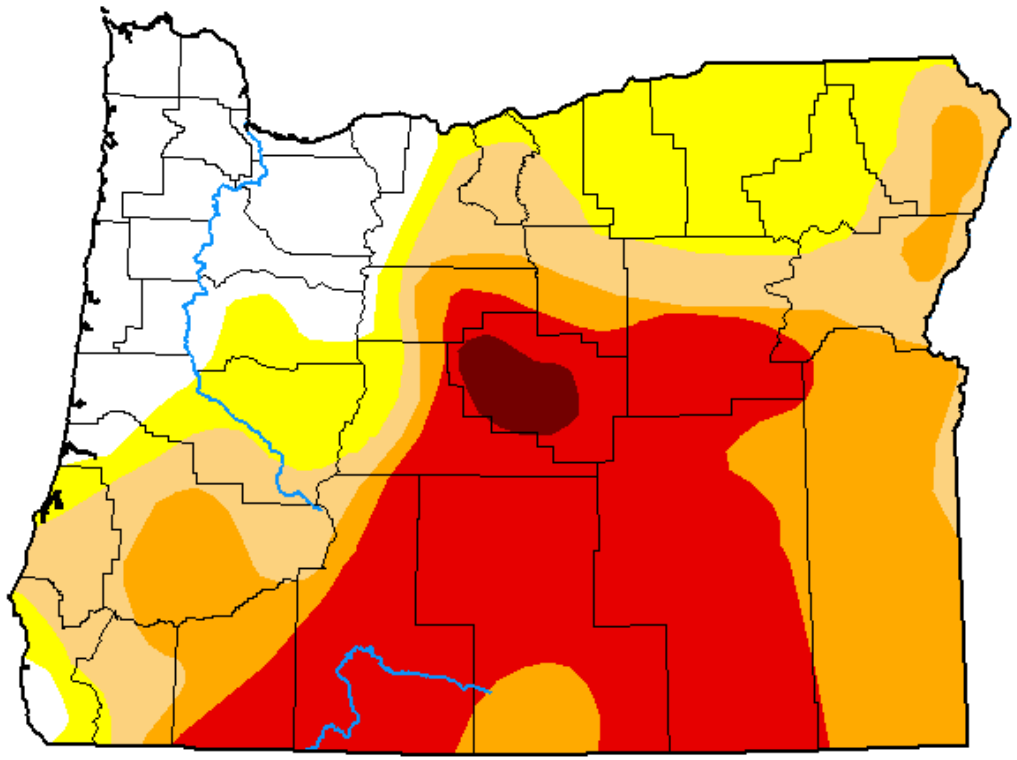
Author:

David Simeral
Western Regional Climate Center

droughtmonitor.unl.edu

U.S. Drought Monitor

Oregon



September 13, 2022

(Released Thursday, Sep. 15, 2022)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	14.92	85.08	68.34	52.22	30.73	1.40
Last Week *09-06-2022*	25.04	74.96	65.71	52.22	30.73	1.40
3 Months Ago *06-14-2022*	24.25	75.75	67.93	56.72	40.06	1.93
Start of Calendar Year *01-04-2022*	4.16	95.84	89.75	75.37	50.84	17.27
Start of Water Year *09-28-2021*	0.00	100.00	100.00	96.47	72.10	26.59
One Year Ago *09-14-2021*	0.00	100.00	100.00	99.34	76.69	26.59

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
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David Simeral
Western Regional Climate Center

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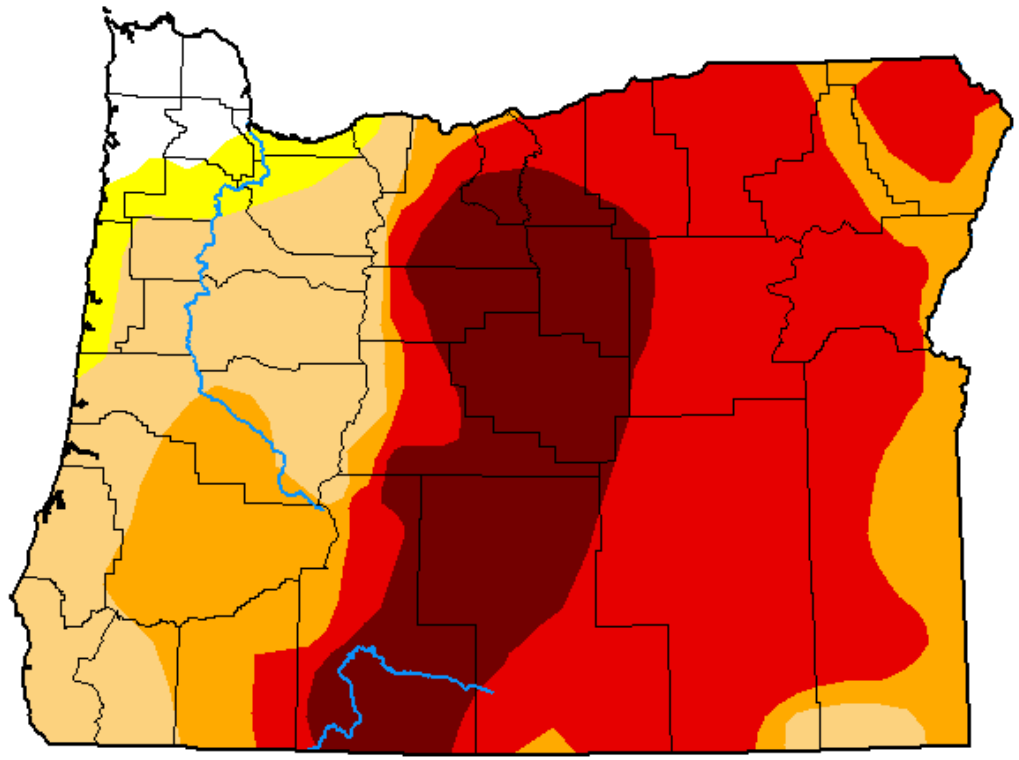

December 28, 2021

(Released Thursday, Dec. 30, 2021)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2.95	97.05	93.89	75.89	57.92	18.52
Last Week *12-21-2021*	2.96	97.04	93.63	83.75	63.14	18.61
3 Months Ago *09-28-2021*	0.00	100.00	100.00	96.47	72.10	26.59
Start of Calendar Year *12-29-2020*	8.57	91.43	83.53	68.71	27.74	0.00
Start of Water Year *09-28-2021*	0.00	100.00	100.00	96.47	72.10	26.59
One Year Ago *12-29-2020*	8.57	91.43	83.53	68.71	27.74	0.00

Intensity:

- None
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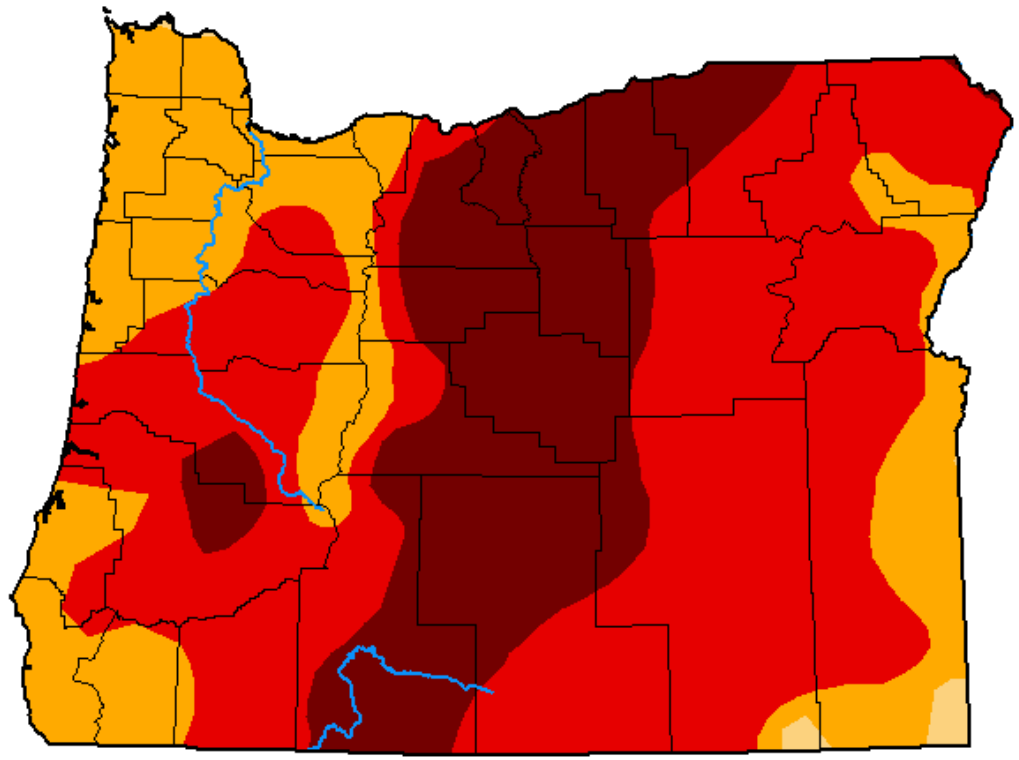
Author:
Brad Pugh
CPC/NOAA

droughtmonitor.unl.edu

U.S. Drought Monitor

Oregon



September 14, 2021

(Released Thursday, Sep. 16, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	99.34	76.69	26.59
Last Week *09-07-2021*	0.00	100.00	100.00	99.08	76.69	26.59
3 Months Ago *06-15-2021*	0.00	100.00	98.99	77.03	36.90	4.78
Start of Calendar Year *12-29-2020*	8.57	91.43	83.53	68.71	27.74	0.00
Start of Water Year *09-29-2020*	6.50	93.50	84.77	65.53	33.59	0.00
One Year Ago *09-15-2020*	6.33	93.67	83.70	64.18	31.84	0.00

Intensity:

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

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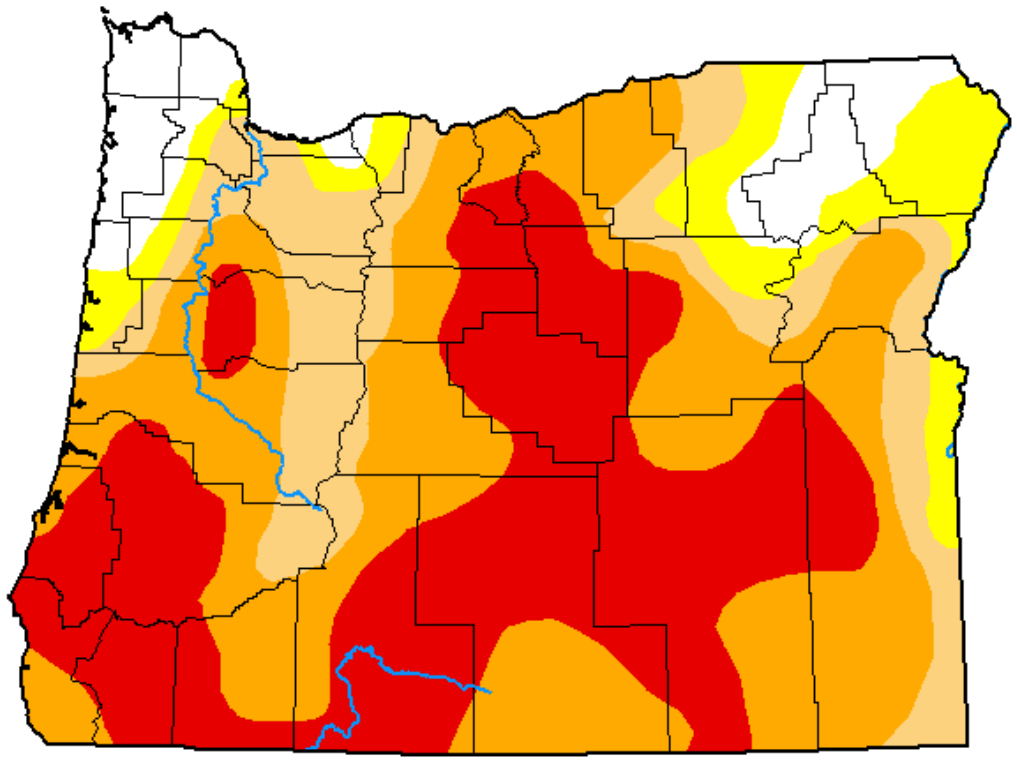
Author:

Brad Rippey
U.S. Department of Agriculture

droughtmonitor.unl.edu

U.S. Drought Monitor

Oregon



December 1, 2020

(Released Thursday, Dec. 3, 2020)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	7.58	92.42	84.10	69.08	34.70	0.00
Last Week *11-26-2020*	8.67	91.33	84.36	69.68	34.27	0.00
3 Months Ago *09-03-2020*	6.36	93.64	80.22	56.99	17.61	0.00
Start of Calendar Year *01-02-2020*	2.40	97.60	24.46	0.00	0.00	0.00
Start of Water Year *10-01-2020*	6.50	93.50	84.77	65.53	33.59	0.00
One Year Ago *12-05-2019*	35.05	64.95	0.00	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
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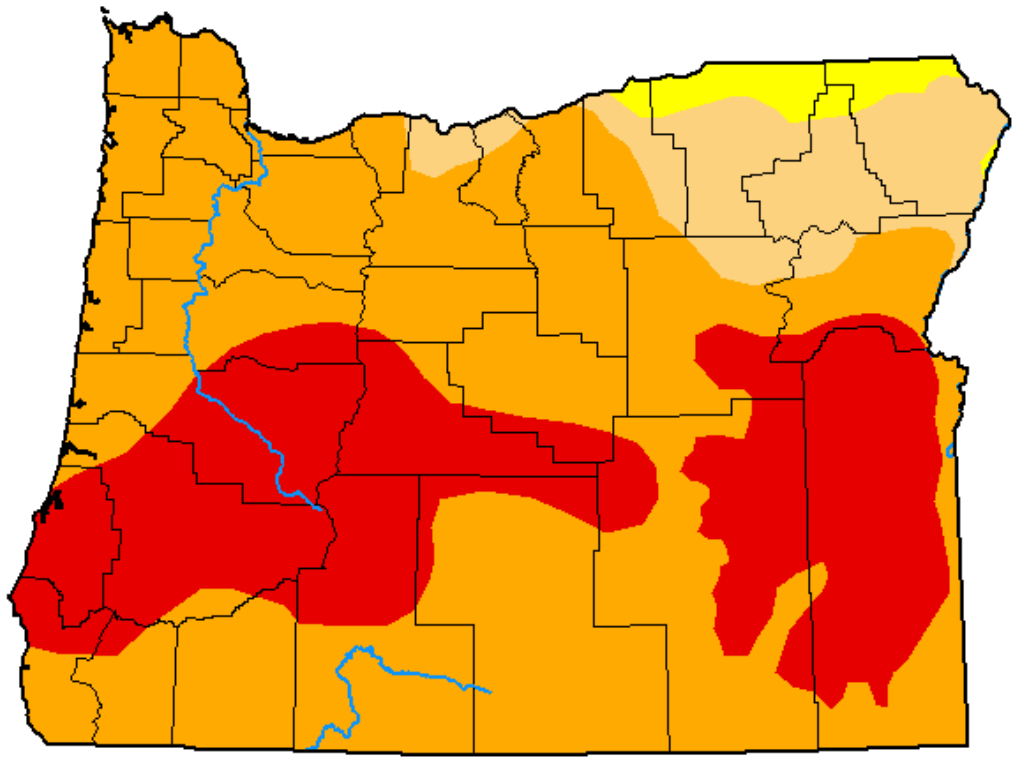
Author:
Richard Heim
NCEI/NOAA

droughtmonitor.unl.edu

U.S. Drought Monitor

Oregon



September 18, 2018

(Released Thursday, Sep. 20, 2018)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	97.68	88.07	31.62	0.00
Last Week *09-13-2018*	0.00	100.00	93.05	83.81	22.62	0.00
3 Months Ago *06-21-2018*	8.54	91.46	45.30	18.36	0.00	0.00
Start of Calendar Year *01-04-2018*	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year *09-28-2017*	39.23	60.77	28.57	0.00	0.00	0.00
One Year Ago *09-21-2017*	22.26	77.74	28.57	0.00	0.00	0.00

Intensity:

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

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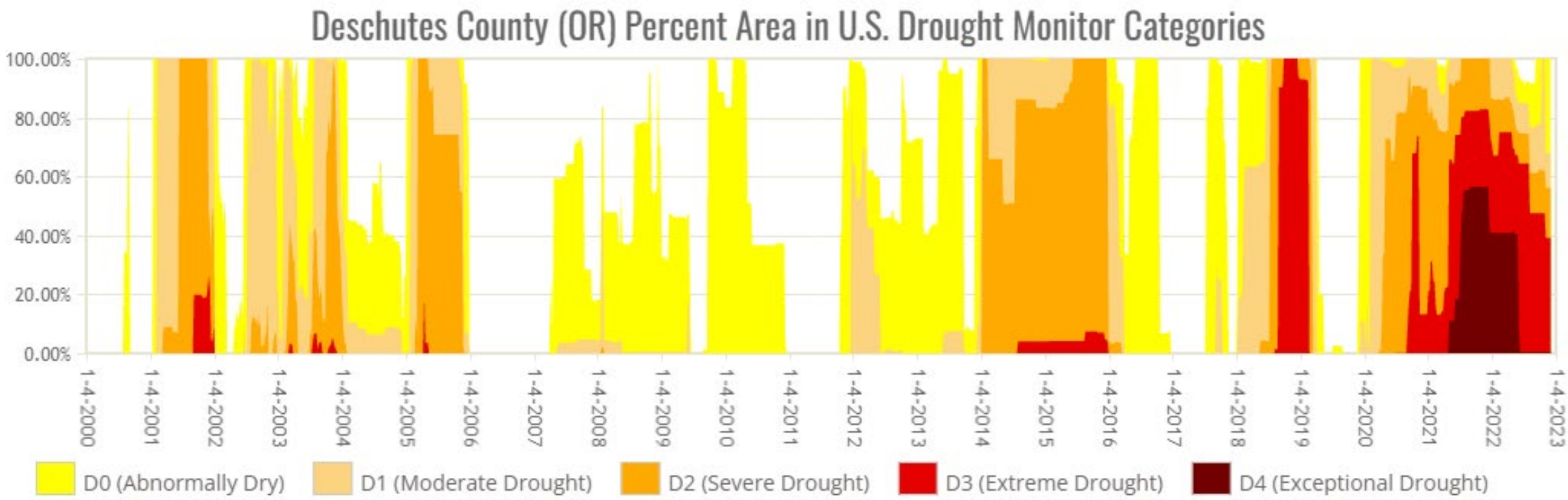
Author:

Jessica Blunden

NCEI/NOAA

droughtmonitor.unl.edu


Deschutes County (OR) Percent Area in U.S. Drought Monitor Categories
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
1-4-2000
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1-4-2023
D0 (Abnormally Dry)
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