



Water Availability & Permitting

Oregon Data Center Advisory Committee

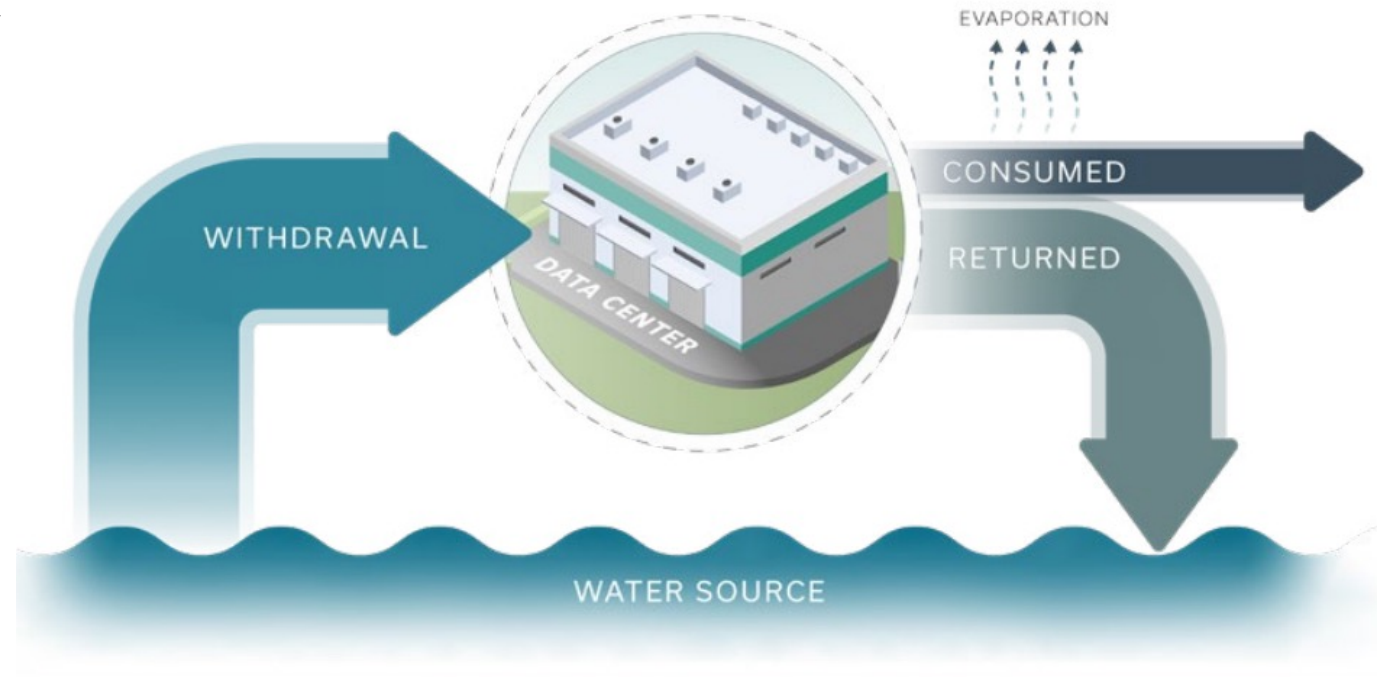


Ivan Gall – Director, Oregon Water Resources Department
March 27, 2026

Data Centers & Water: Key Considerations

- Oregon facing greater water scarcity
- New or existing rights for supply
- Limited data on data center water use

$$[\text{withdrawal}] - [\text{returned}] = [\text{consumption}]$$



Key Responsibilities



Water data and analysis



Water right transactions



Public safety & water distribution



Collaboration & investments

Key Tenets of Oregon Water Law

- **Public Resource**
- First in time, first in right (priority)
- Beneficial use without waste
- Appurtenance
- Water must be used

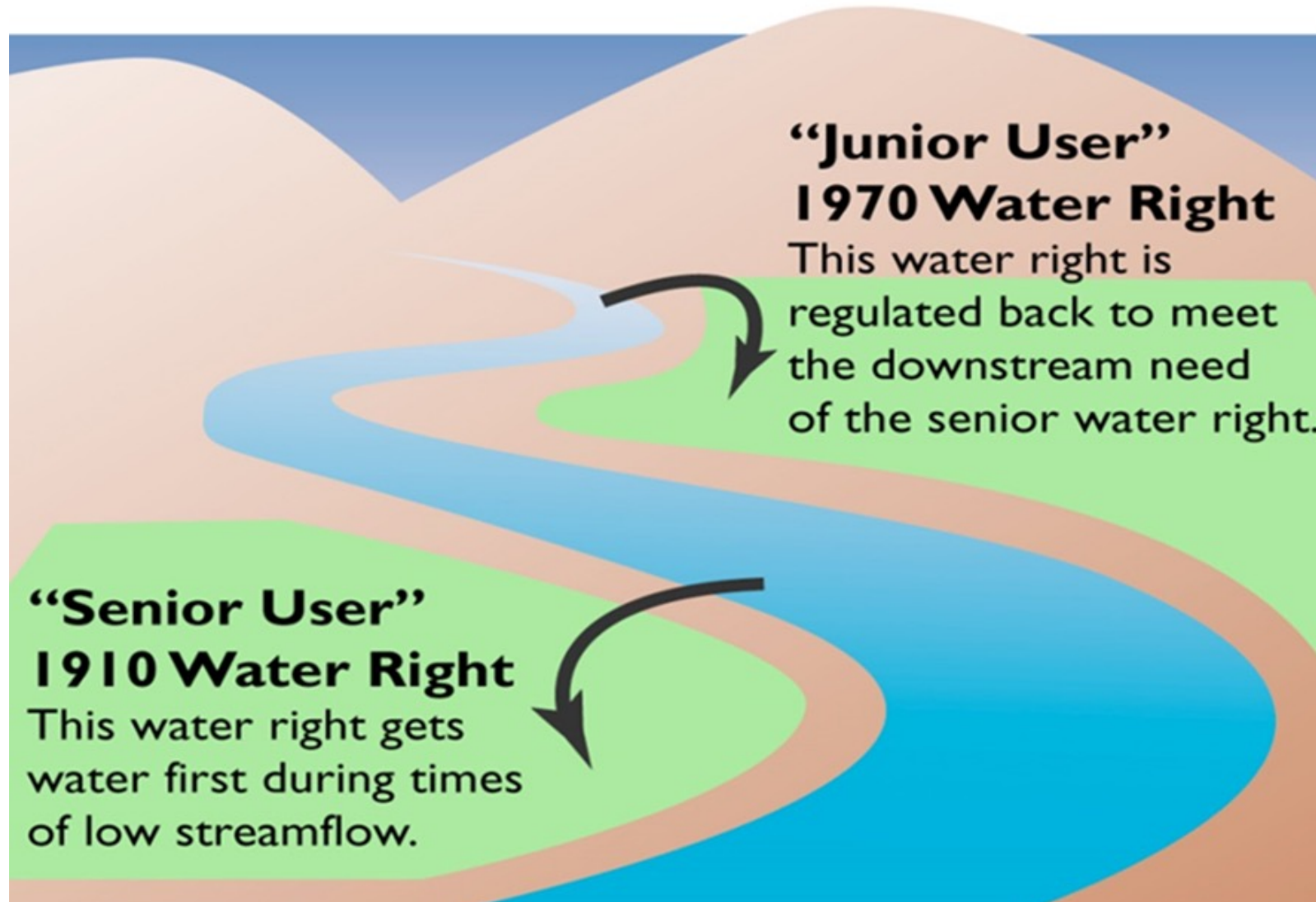


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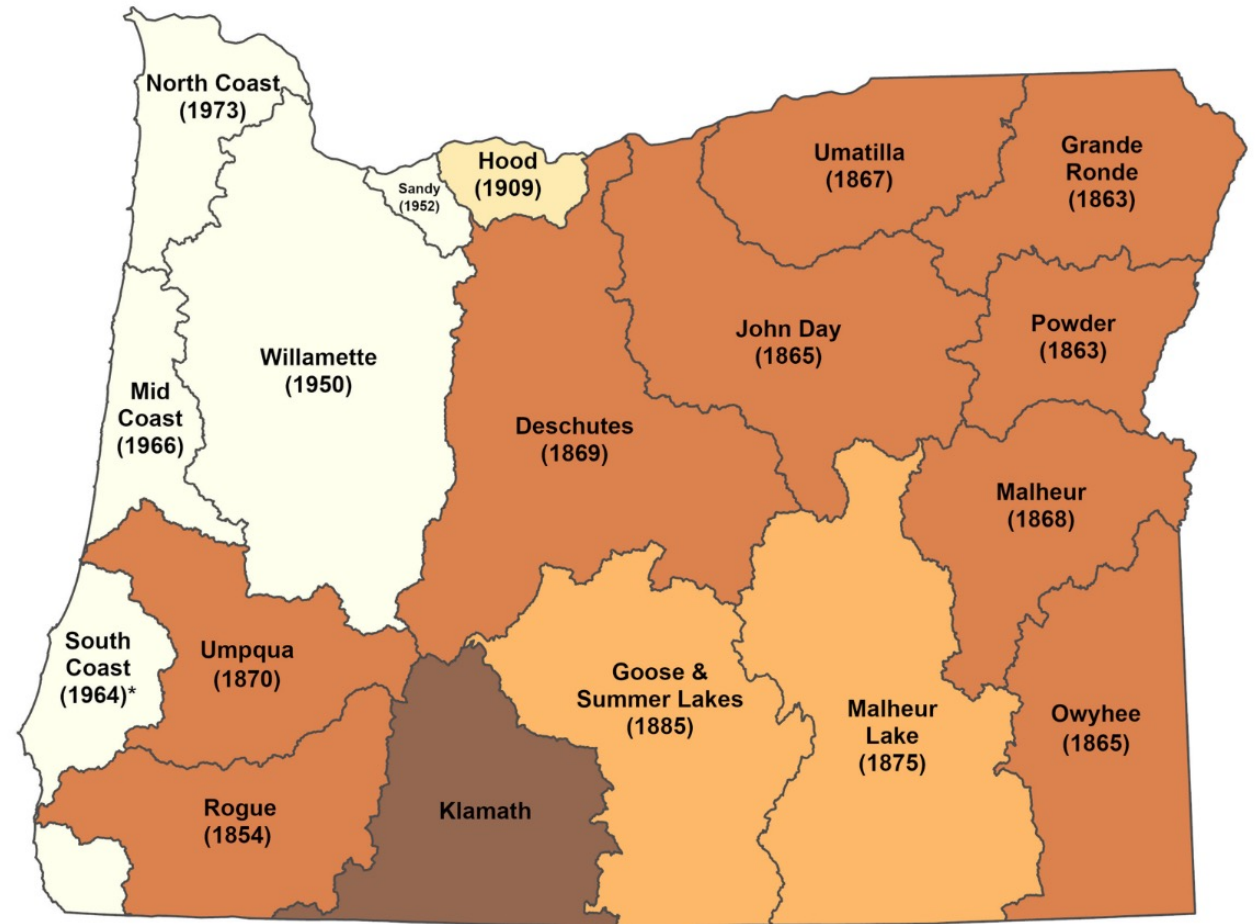
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1909 Water Code: Prior Appropriation Doctrine



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Earliest Priority Date to Which Surface Water Rights Regulated (2018 - 2020)

Surface Water regulation by administrative basin

- 1854 - 1870
- 1871 - 1885
- 1886 - 1912
- 1913 - 1976
- Time Immemorial (most senior water right)

Miles
0 10 20 30 40 50
Oregon Lambert Coordinate Reference System (EPSG #2992)

Map prepared by OWRD GIS (rh), 9/26/2022
(state_2022_SWregulationdatebyAdminBasin.aprx)

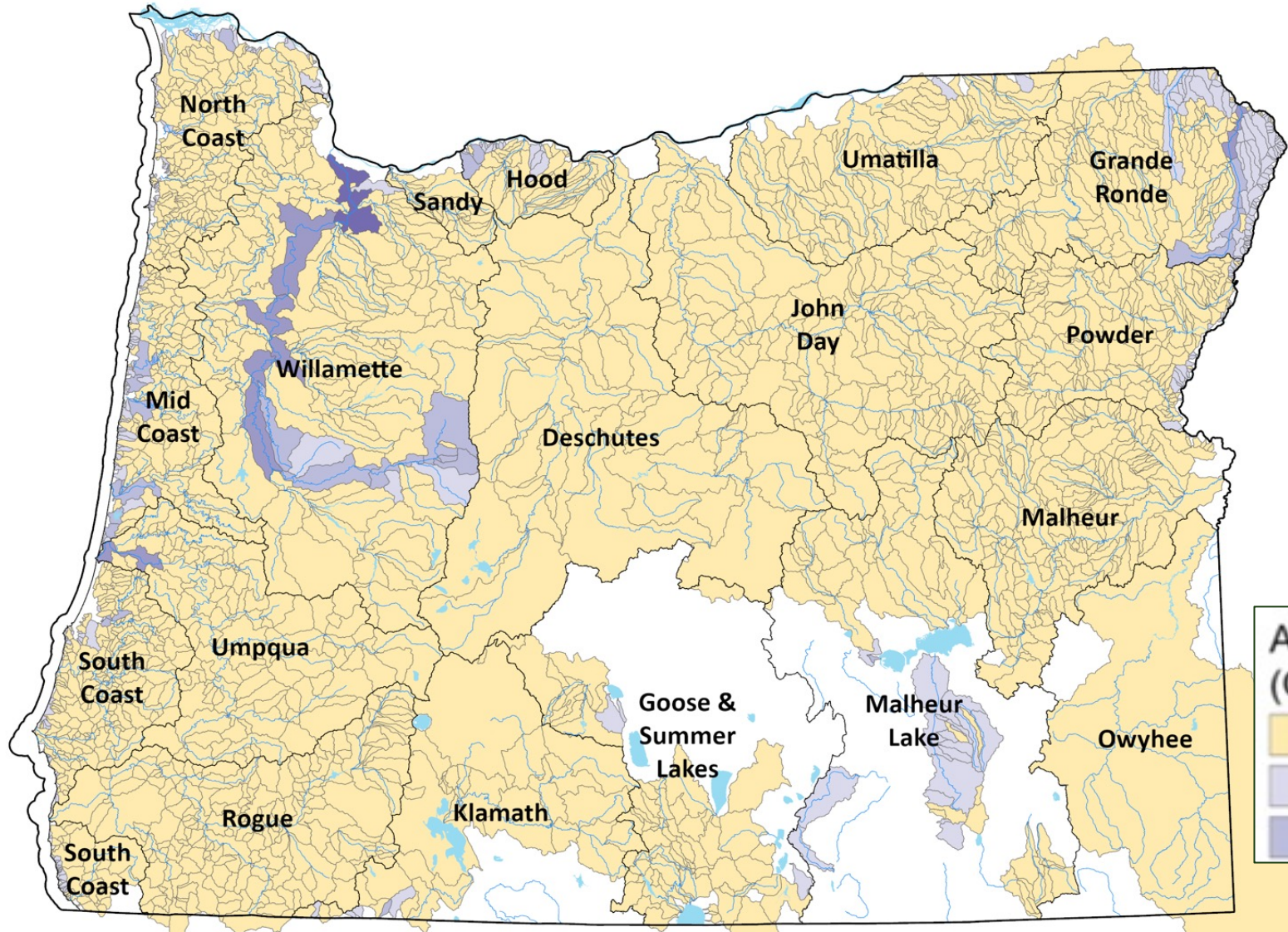
*Regulatory years fall outside standard years selected for this map.

DISCLAIMER

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



Surface Water Availability Today



- Most streams and rivers are fully allocated during the summer months
- Water availability is determined for new water right applications

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Agricultural



Commercial



Domestic



Fish Life



Irrigation



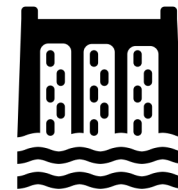
Livestock



Mining



Municipal



Power



Public Instream
Use



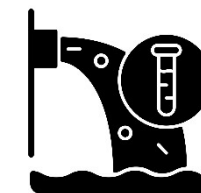
Recreation



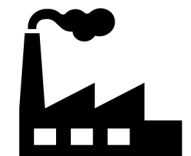
Wildlife



Wetland
Enhancement

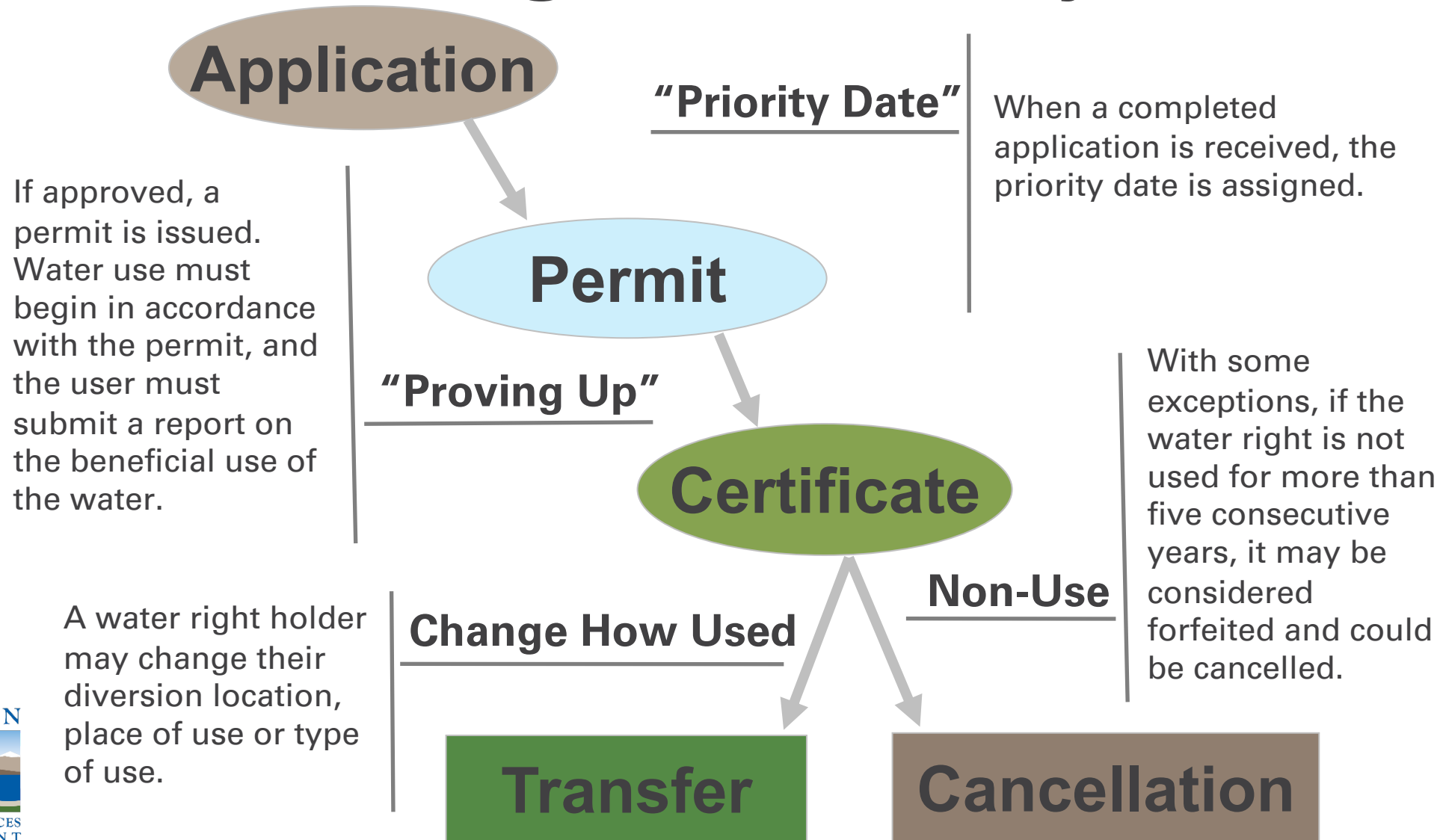


Pollution
Abatement



Industrial

The Water Right Permit System



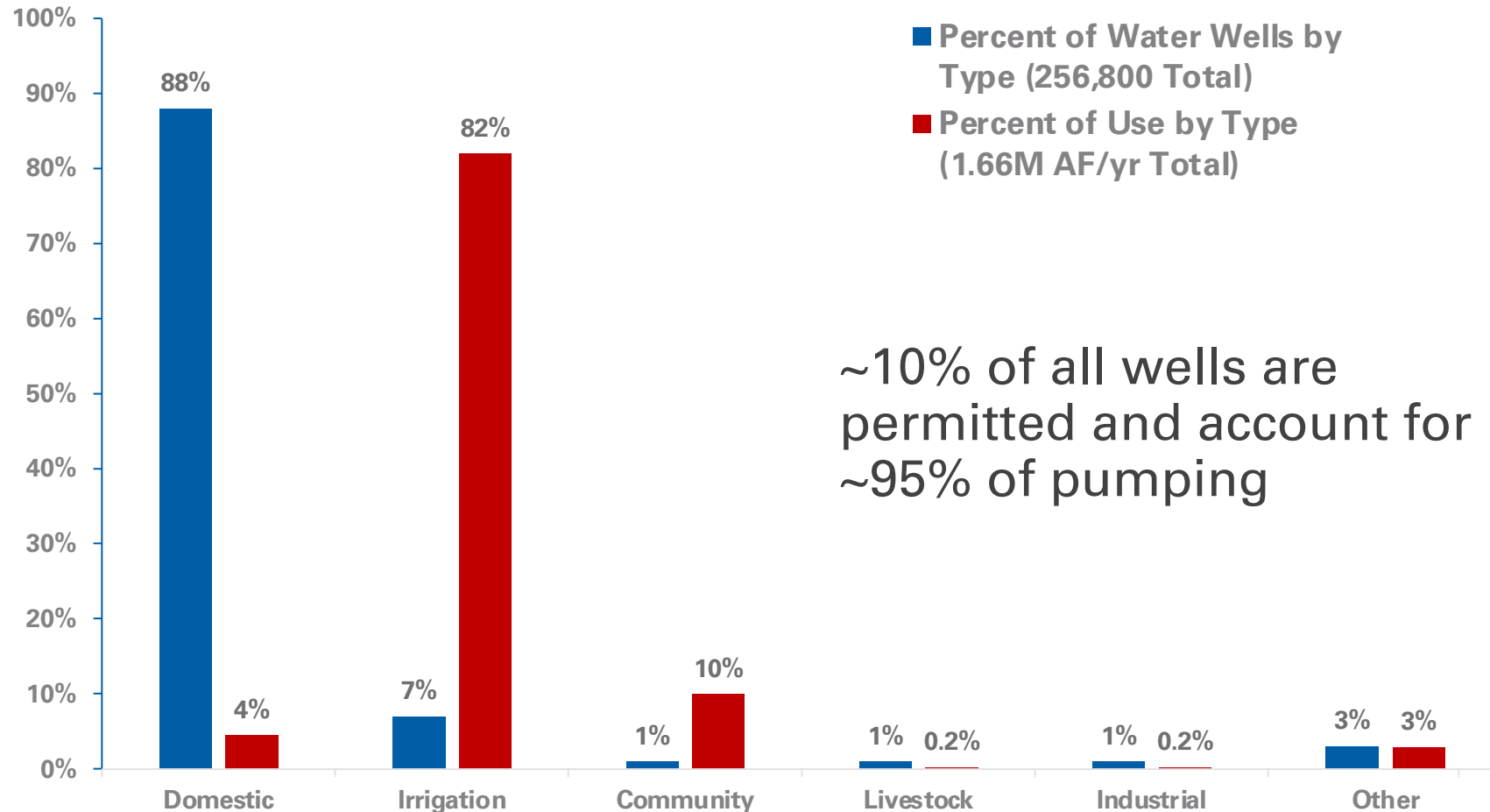
Water use in Oregon

- Total use in Oregon is 6,580 million gallons per day (MGD)
- Includes surface water and groundwater

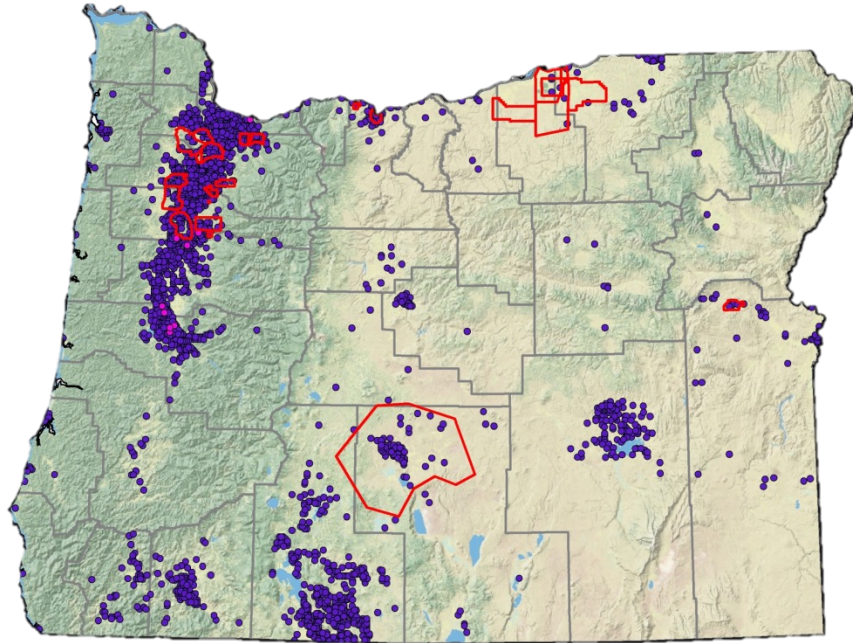
Category	Amount (in MGD)	% of Total Use
Irrigation	5,160	78.4%
Aquaculture	634	9.6%
Public Water Suppliers	567	8.6%
Industrial	105	1.6%
Domestic	74	1.1%
Livestock	16	0.2%
Thermoelectric	11	0.2%
Mining	11	0.2%

Source: USGS, Estimated Use of Water in the United States in 2015

Wells and Groundwater Use in Oregon



Groundwater Development in Oregon



1955

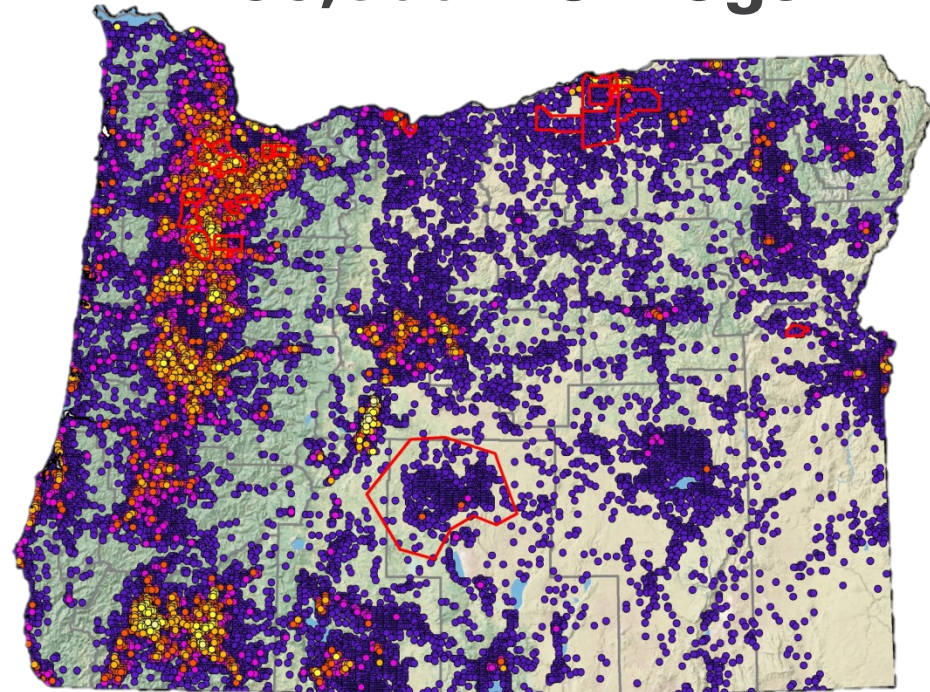
4,660 well logs

Density of Water Well
Logs per 640 Acres

- 1 - 16 (<= 1 well / 40 acres)
- 17 - 32 (<= 1 well / 20 acres)
- 33 - 64 (<= 1 well / 10 acres)
- 65 - 128 (<= 1 well / 5 acres)
- 129 - 256 (<= 1 well / 2.5 acres)
- 257 - 320 (<= 1 well / 2.0 acres)
- >320 (<= 1 well / 1.0 acres)

- ▭ Counties
- ▭ Ground Water Restricted Areas

2016
256,800 well logs



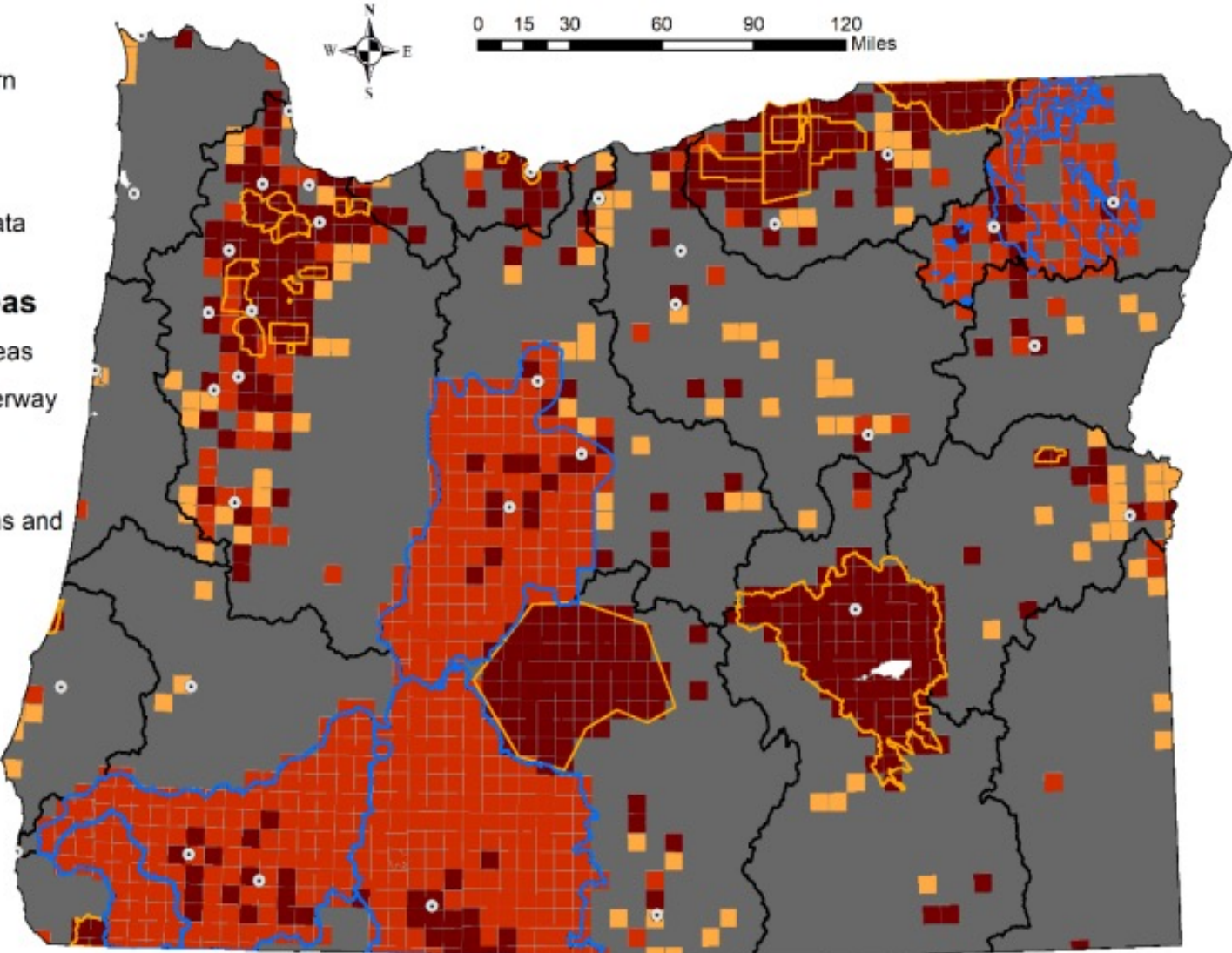
Groundwater Today

Concern Ratings

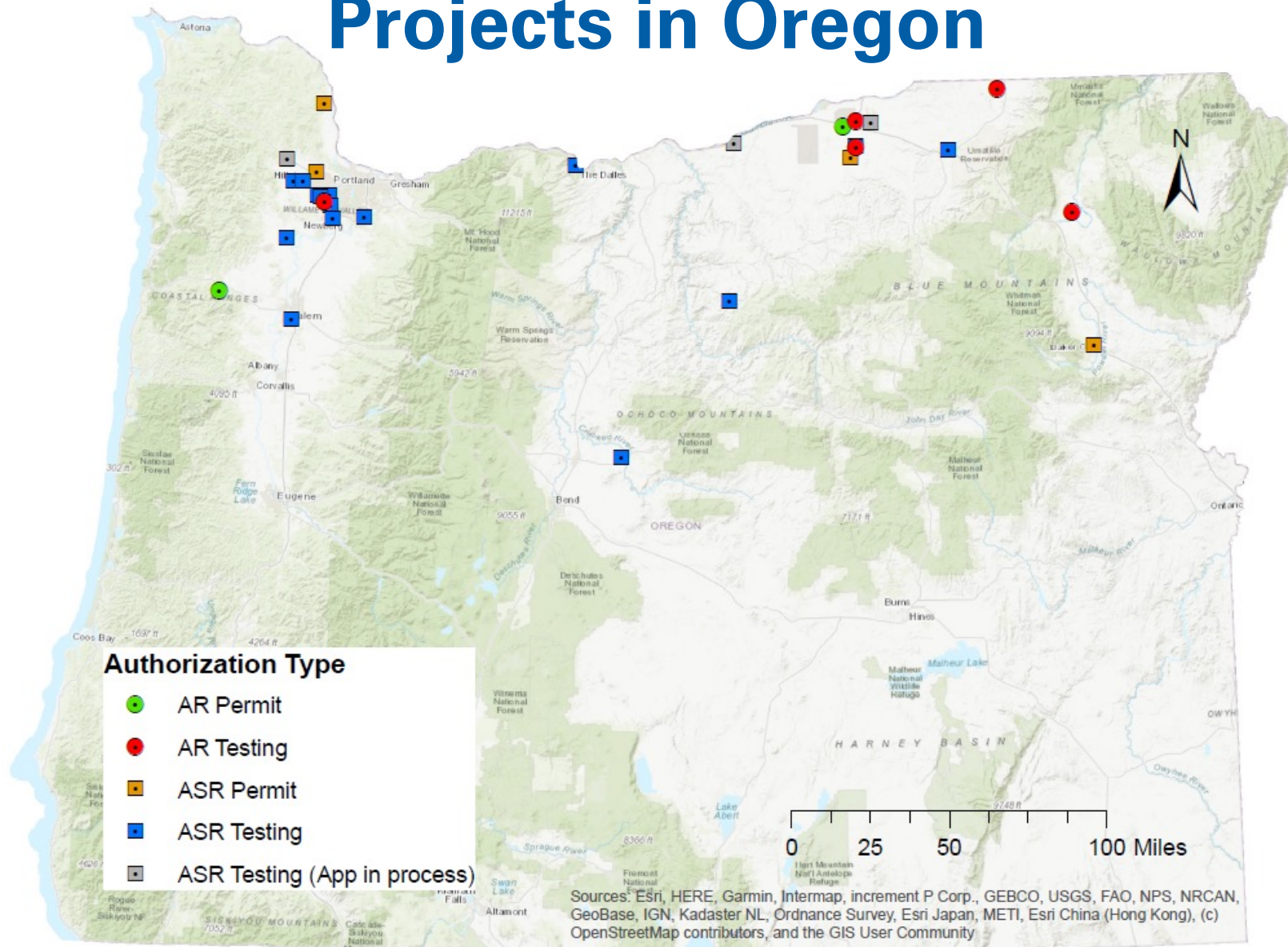
- Significant Concern
- Concern
- Yield-Limited
- No Concerning Data Available

Administrative Areas

- GW Restricted Areas
- State Scenic Waterway Restrictions
- OWRD Basins
- County Seat Towns and Cities

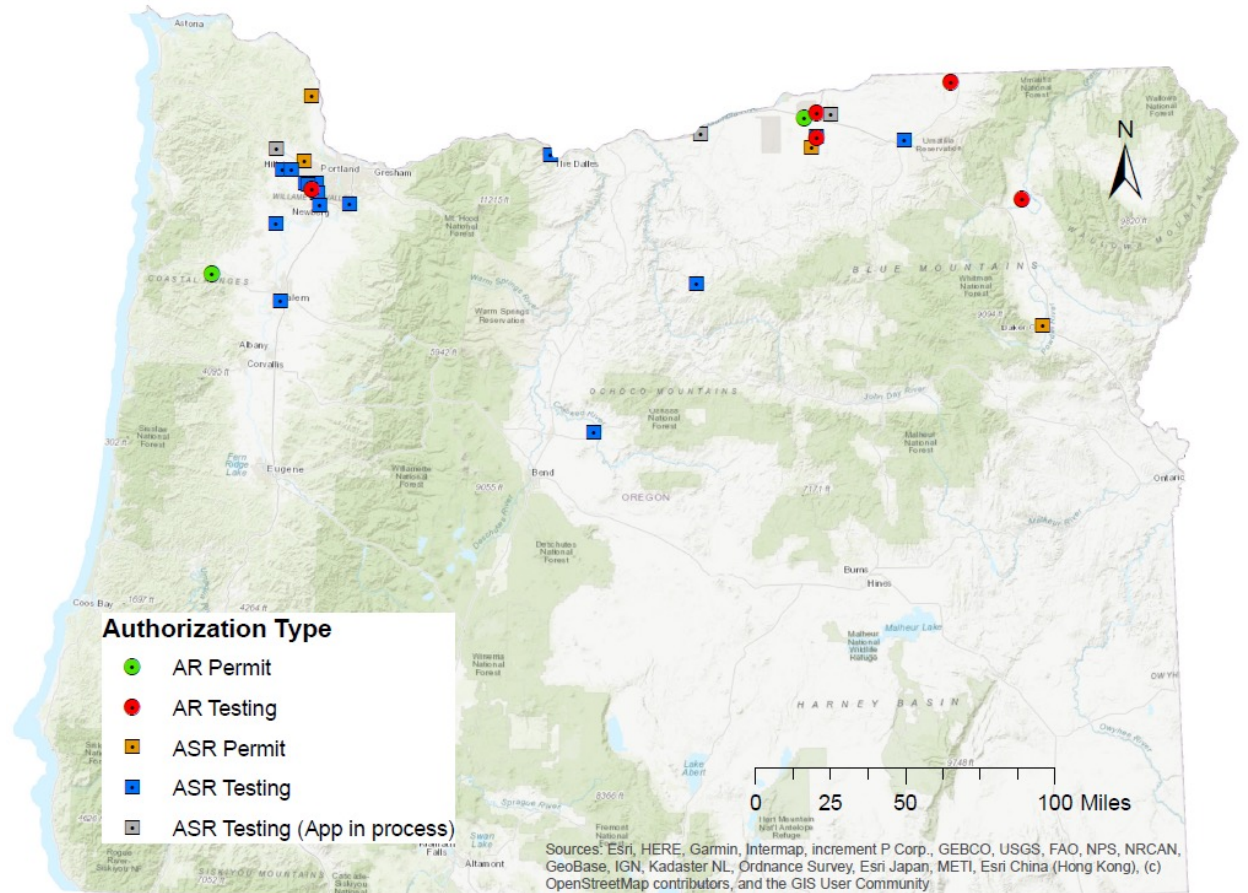


Artificial Recharge & Aquifer Storage/Recovery Projects in Oregon



Wrapping Up

- Difficult to get new water rights in Oregon
- New data centers are likely to use public suppliers or acquire existing rights
- New uses, for any purpose, can stress water supplies in some basins



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Thank you!

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