Mid-Columbia Basin Drought Plan

Evergreen Rural Water Annual Meeting

May 15, 2025

Lincoln County Conservation District

CBSWC

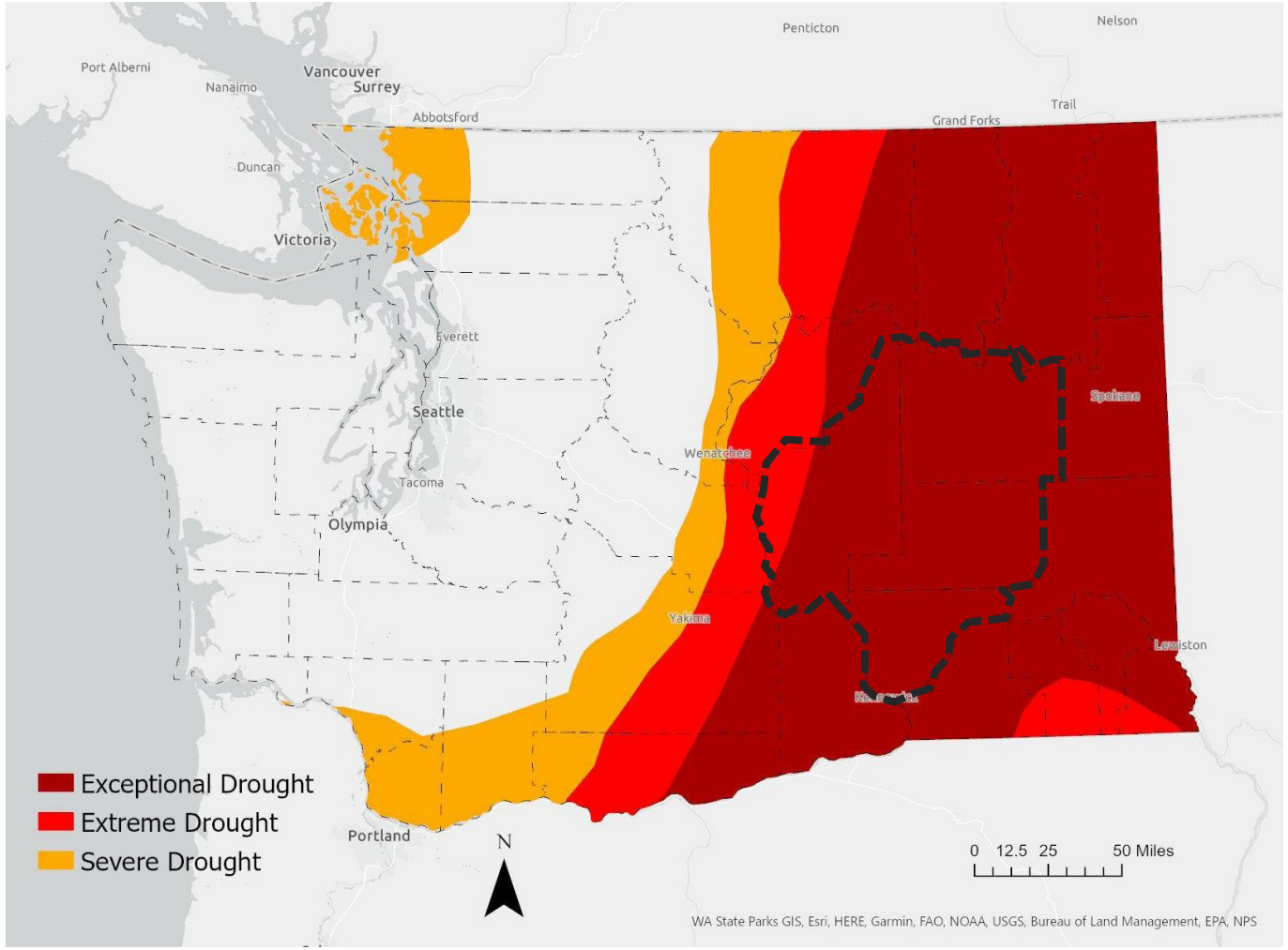
columbia basin sustainable water coalition

LANDAU ASSOCIATES

GeoEngineers

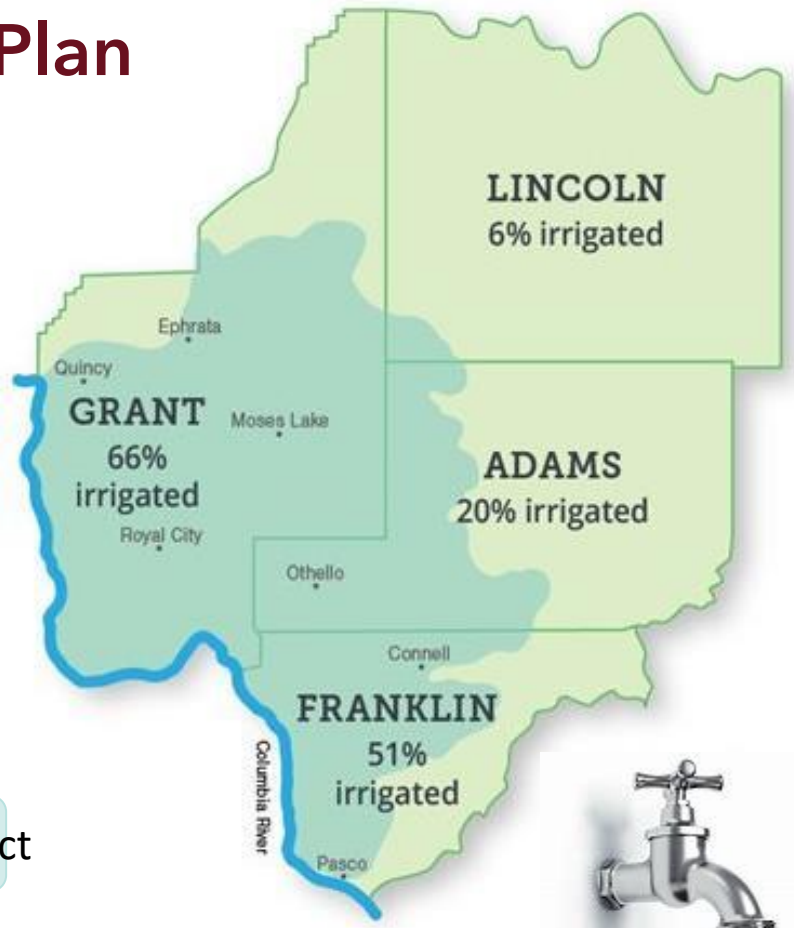
// Presentation Outline

- People Introduction (presenters)
- Project Introduction
- Drought Effects – The Why
- Drought Plan Components
- Current and Future Actions
- Outreach
- Brainstorm



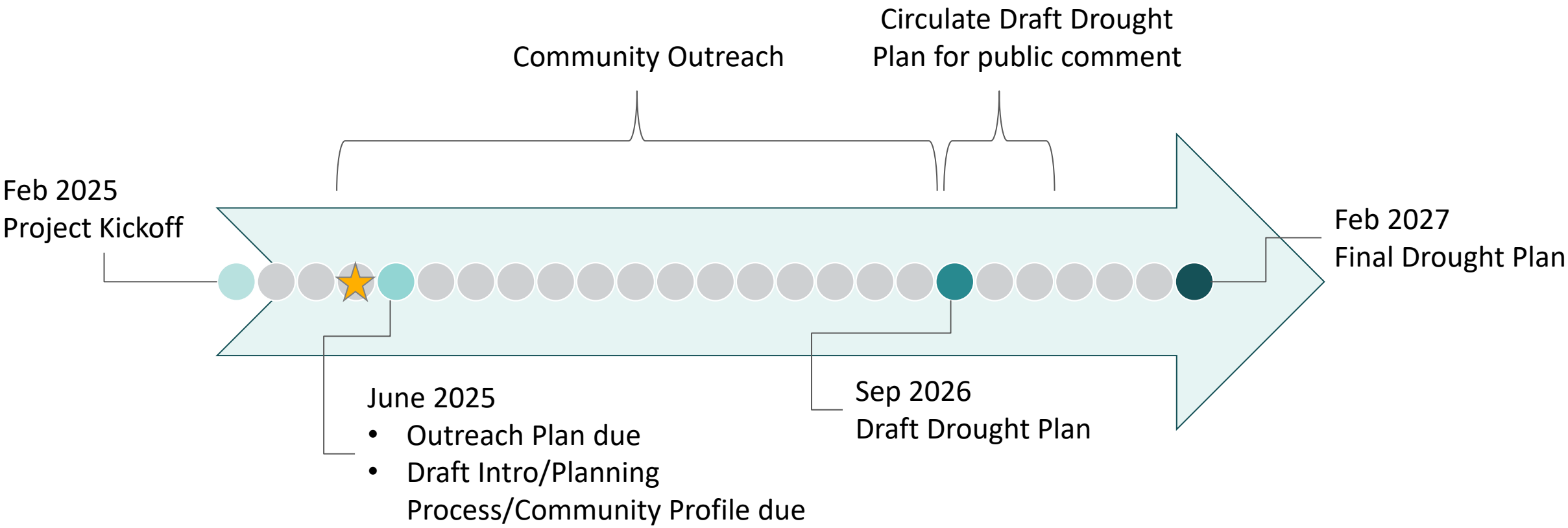
Project Introduction; Snapshot Mid-Columbia Basin Drought Plan

- **Where?** FLAG Counties
- **When?** Feb 2025 – Feb 2027
- **Why?** Per Ecology (2023), incentivize and facilitate increased local and vulnerable community drought preparedness, resiliency, and water supply security
- **Goals:**
  - ID drought risks and drought mitigation projects
  - Help FLAG communities secure funding for project implementation
- **Funding:** Ecology Water Resources, Drought Planning and Preparedness Grant



80% of the Population relies on groundwater for drinking water

Project Introdution: Schedule – 2 Year Grant



// Drought Effects – The Why

- Economic disruption
- Effects on natural resources
- Public health effects
- Groundwater availability (driven by increased demand)
- Management Risks

Drought Effects; Economic Disruption

- Vulnerabilities/Risks
  - Crop and pasture losses
  - Increased on-farm costs
  - Animal stress
  - Reduced hydropower generation
- Example: 2015 Drought
  - $633-773 million gross revenue losses in agriculture

Drought Effects; Natural Resources

- Fisheries
  - Low flows
  - High water temperatures
  - Poor water quality
- Increase risk of wildfire

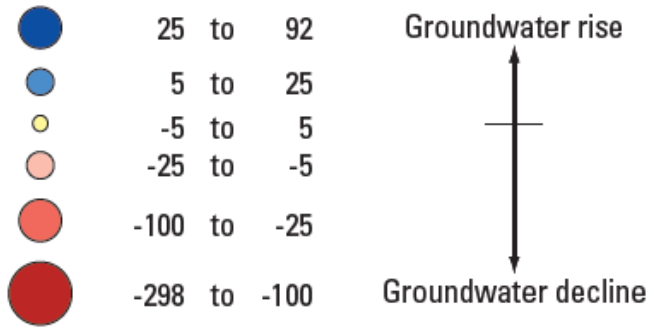
2022 City of Lind Fire

Drought Effects; Public Health

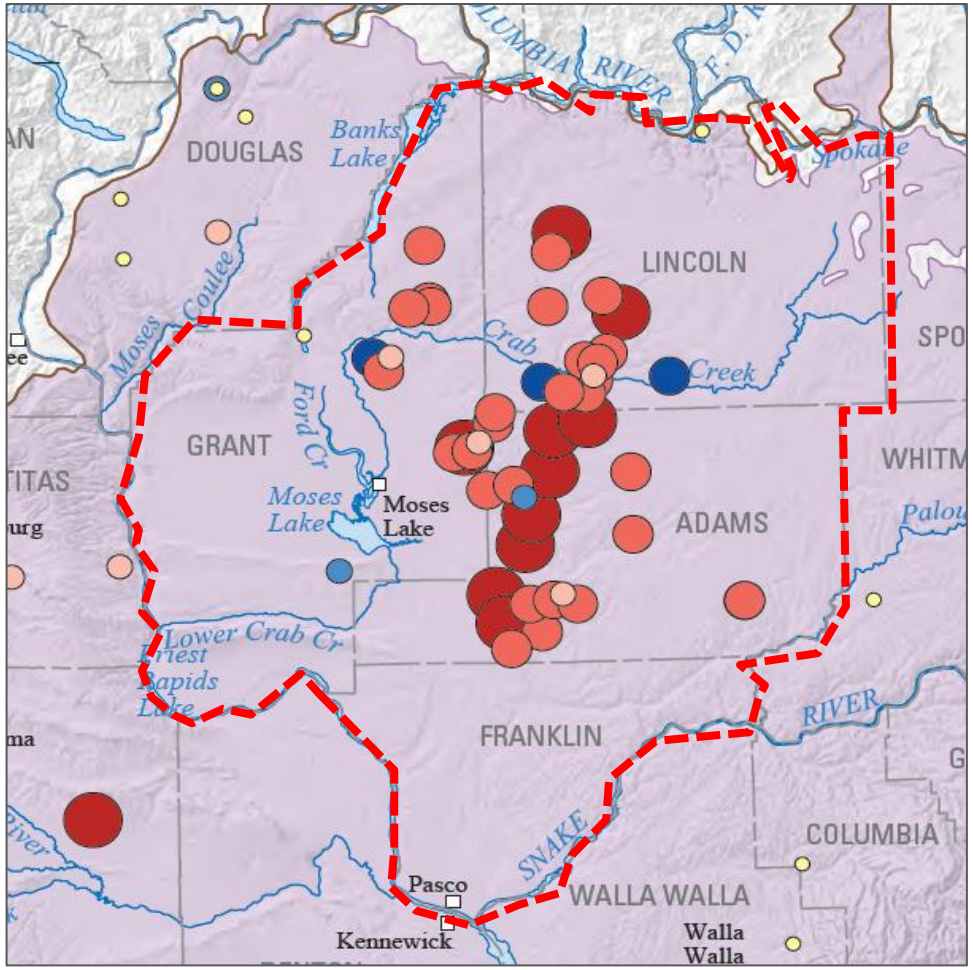
- Access to safe, reliable drinking water
- Food sources may be compromised
- Mental health
- Heat
- Smoke
  - Diminished air quality
  - Increased respiratory distress
- Reduction in recreation

Drought Effects; Groundwater Availability

- Declining groundwater levels
- Water shortages
- Drinking water dependence on groundwater
- Irrigation dependence on groundwater

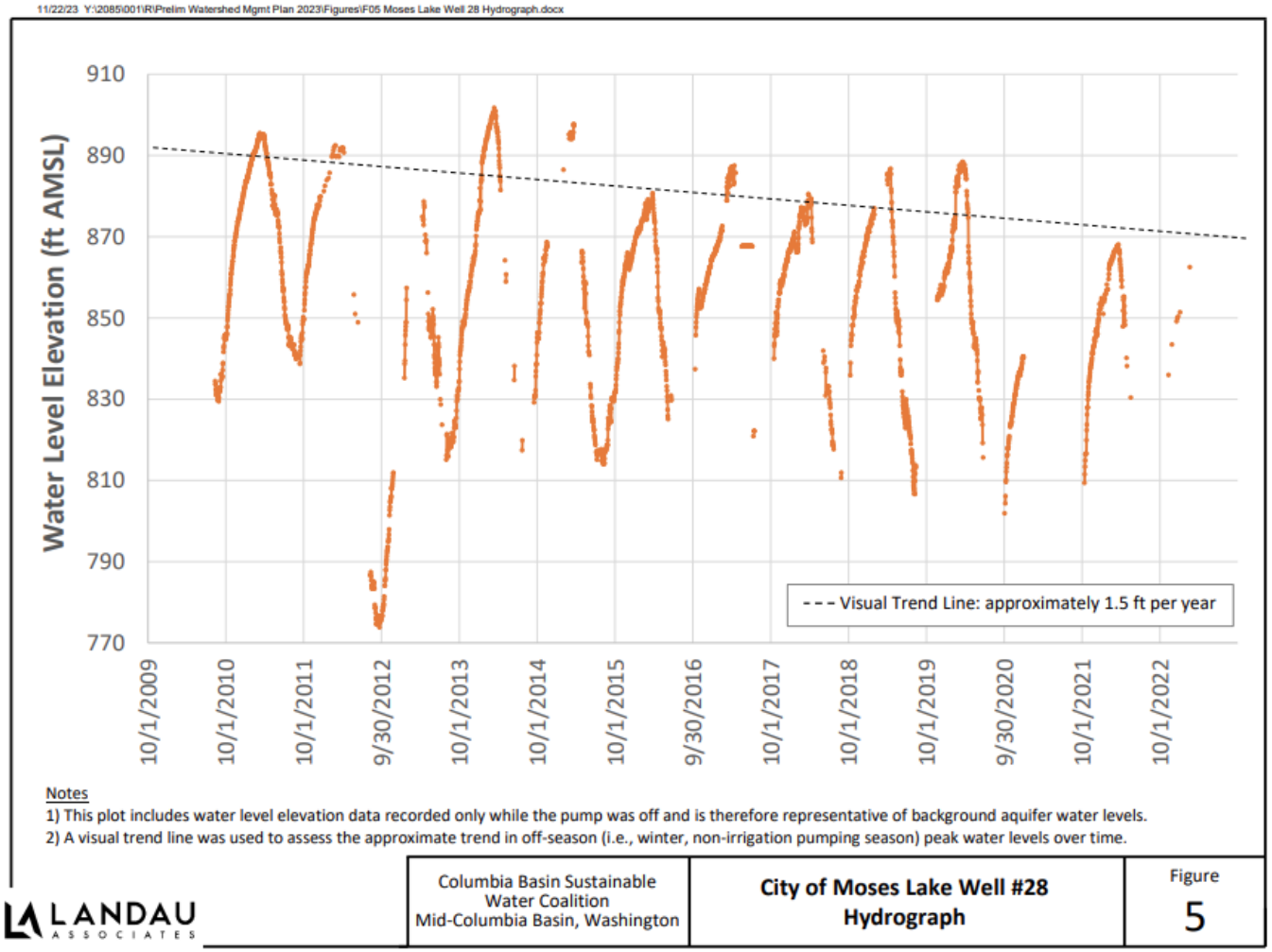


Groundwater Declines
Grande Ronde 1984-2009

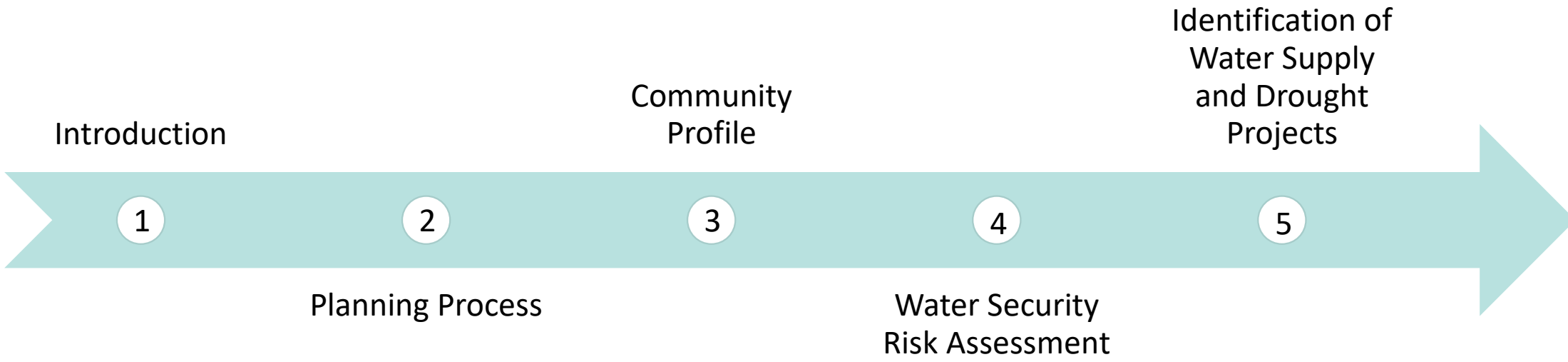


Drought Effects; Management Issues

- Lack of data for water system to use for decision making purposes
- Small water systems have little control over water demand



Drought Plan Components: Plan Outline

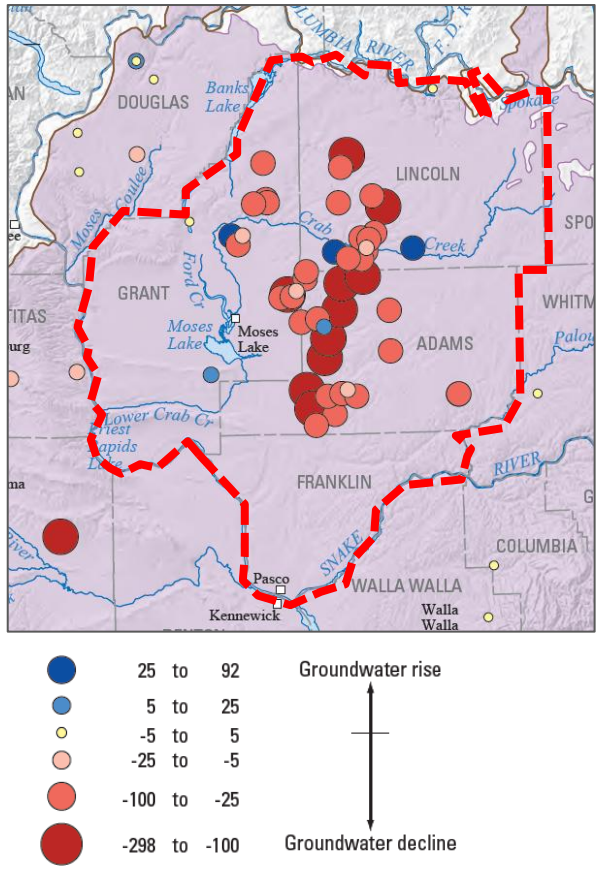


// Section 1: Introduction

- Intent of "the Plan"
  - Identify factors that make local communities **vulnerable** to drought
  - Assess current level of drought **preparedness** in the region
  - Water supply-side and water demand-side **projects and actions** to decrease region's drought vulnerability
  - **Costs and timing** for those projects and actions, and identify potential funding sources

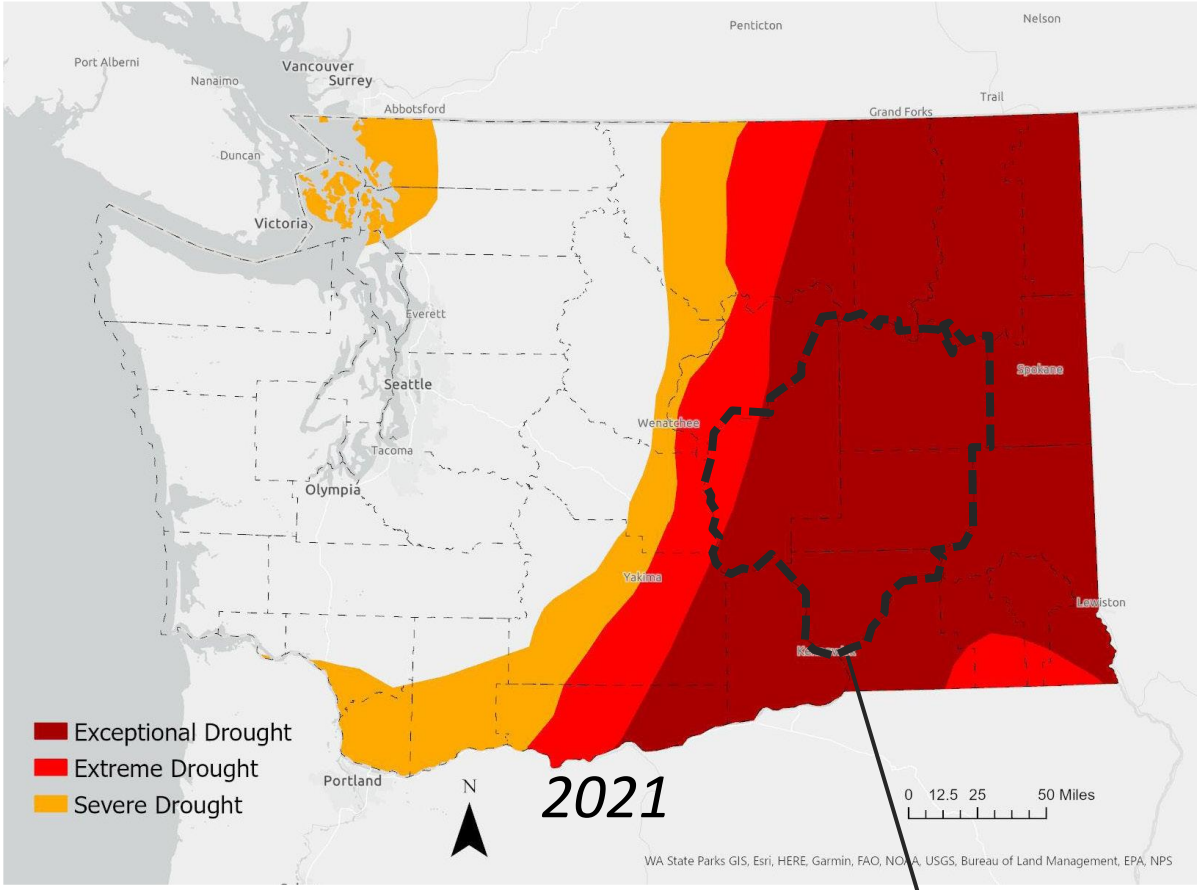
Annual Precipitation

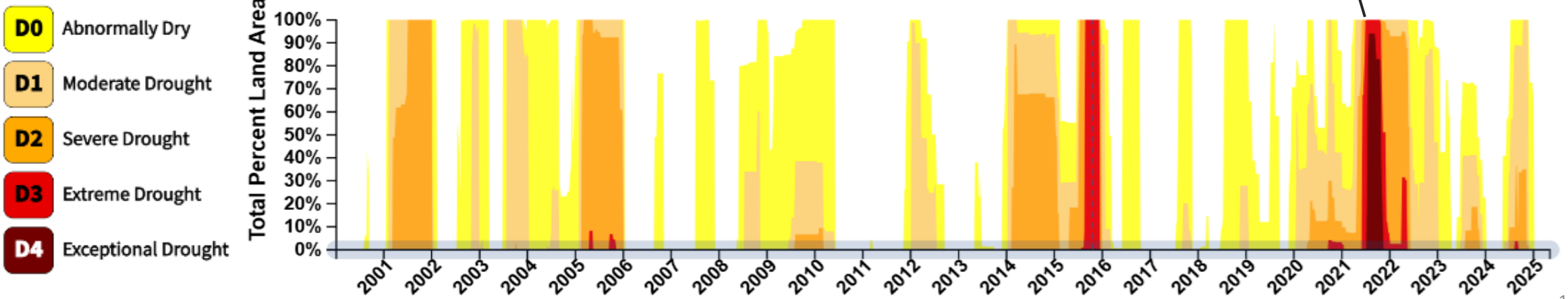
Groundwater Declines Grande Ronde 1984-2009



// Section 1: Introduction

- History of Drought
  - 2015
  - 2021
    - Reduced irrigation water = yield loss for several crops
    - Impacts to drinking water supply?
- Future of Drought
  - More common in the future





// Section 2: Planning Process

- Who is involved?

Project Lead

Lincoln County Conservation District

CBSWC columbia basin sustainable water coalition

Project Support

LANDAU ASSOCIATES

GeoEngineers

Input + Influence

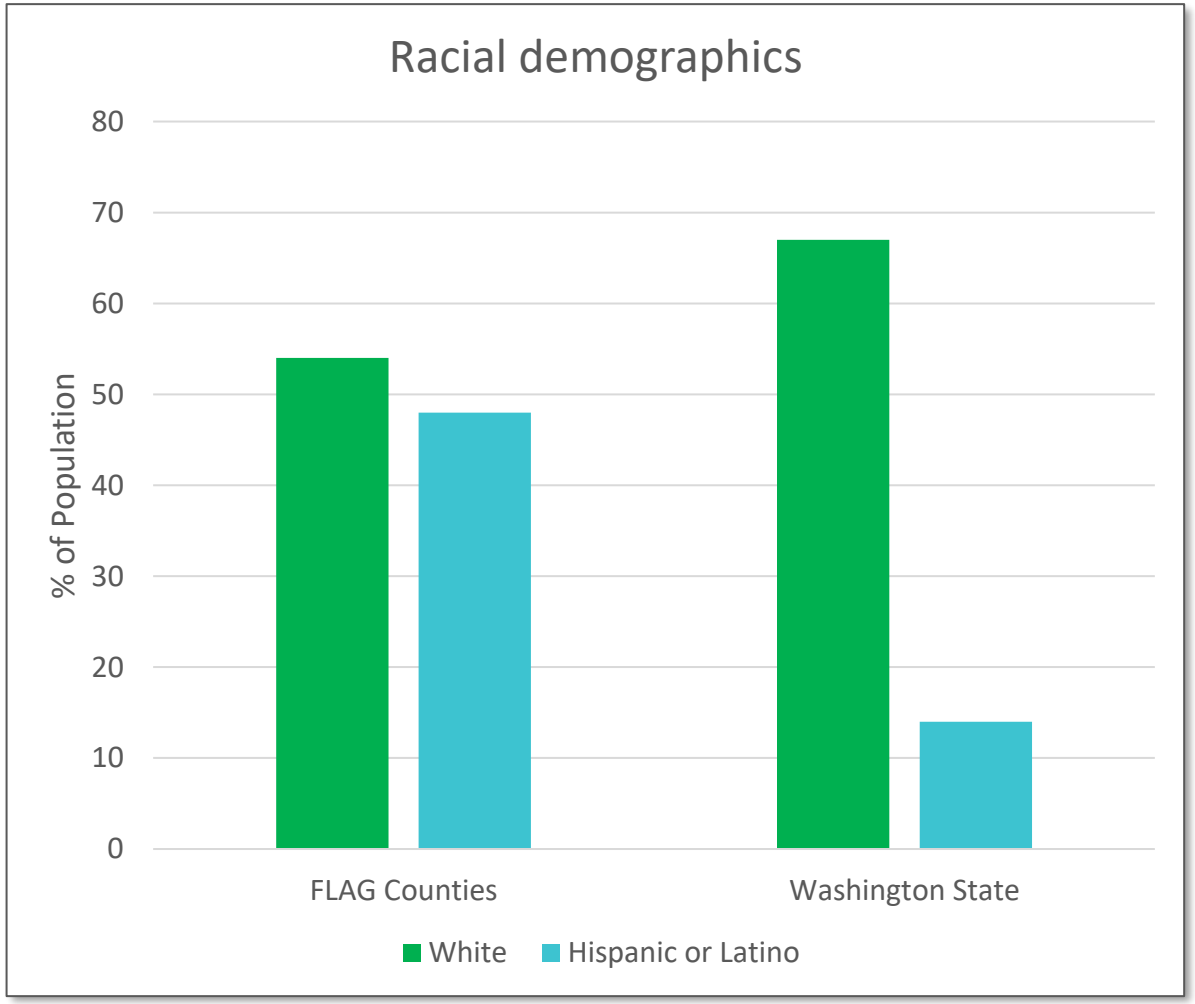
- Local governments
- Water purveyors
- Conservation Districts
- Irrigation Districts
- Legislators
- Farmers
- Farm workers
- Community members

// Section 3: Community Profile

- Demographics
- Employment
- Income
- Vulnerable Communities

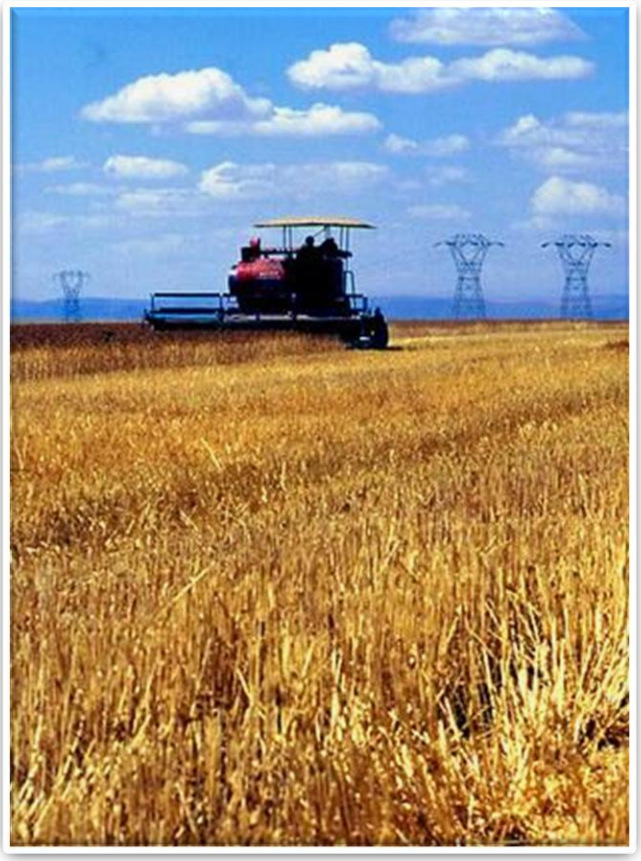
General Demographics

- Population = 227,361
- Sex
  - 51% male
  - 49% female
- Race
  - 54% White
  - 48% Hispanic or Latino
- Age
  - 25% of the population is under 20 years



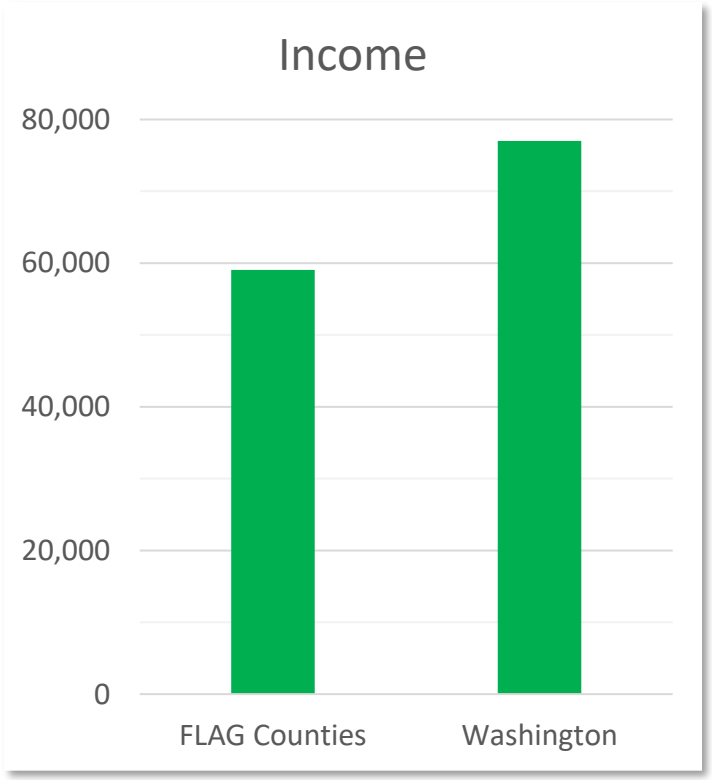
// Workforce Demographics & Employment

Industry	FLAG Counties		Washington
	Estimate	Percent	Percent
Educational services, health care and social assistance	19,220	20.09%	21.60%
Agriculture, forestry, fishing and hunting, and mining	19,026	19.89%	2.50%
Manufacturing	10,016	10.47%	9.50%
Retail trade	8,739	9.13%	11.60%
Professional, scientific, and management, and administrative and waste management services	6,553	6.85%	13.60%

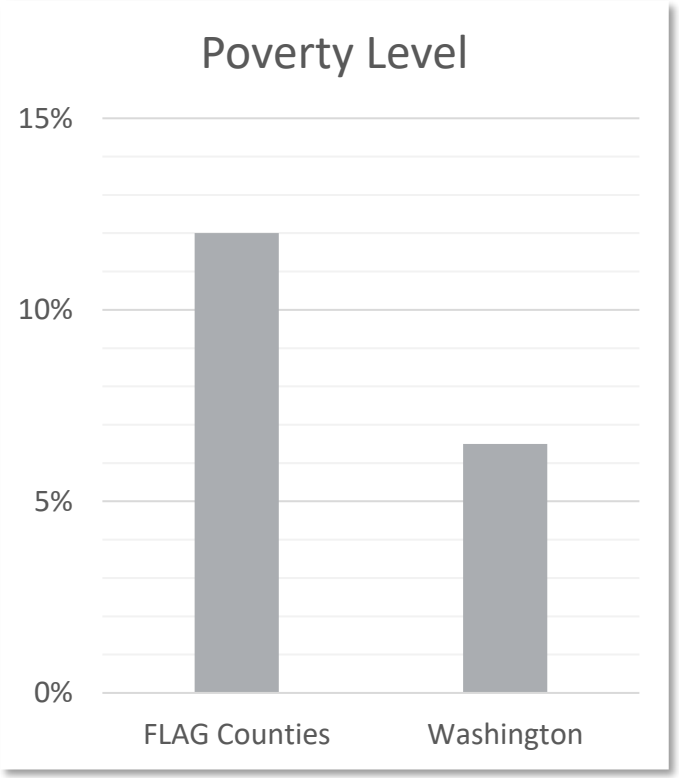


Income

- Median household income
  - $59,064 - FLAG Counties (average)
  - $77,006 - WA State

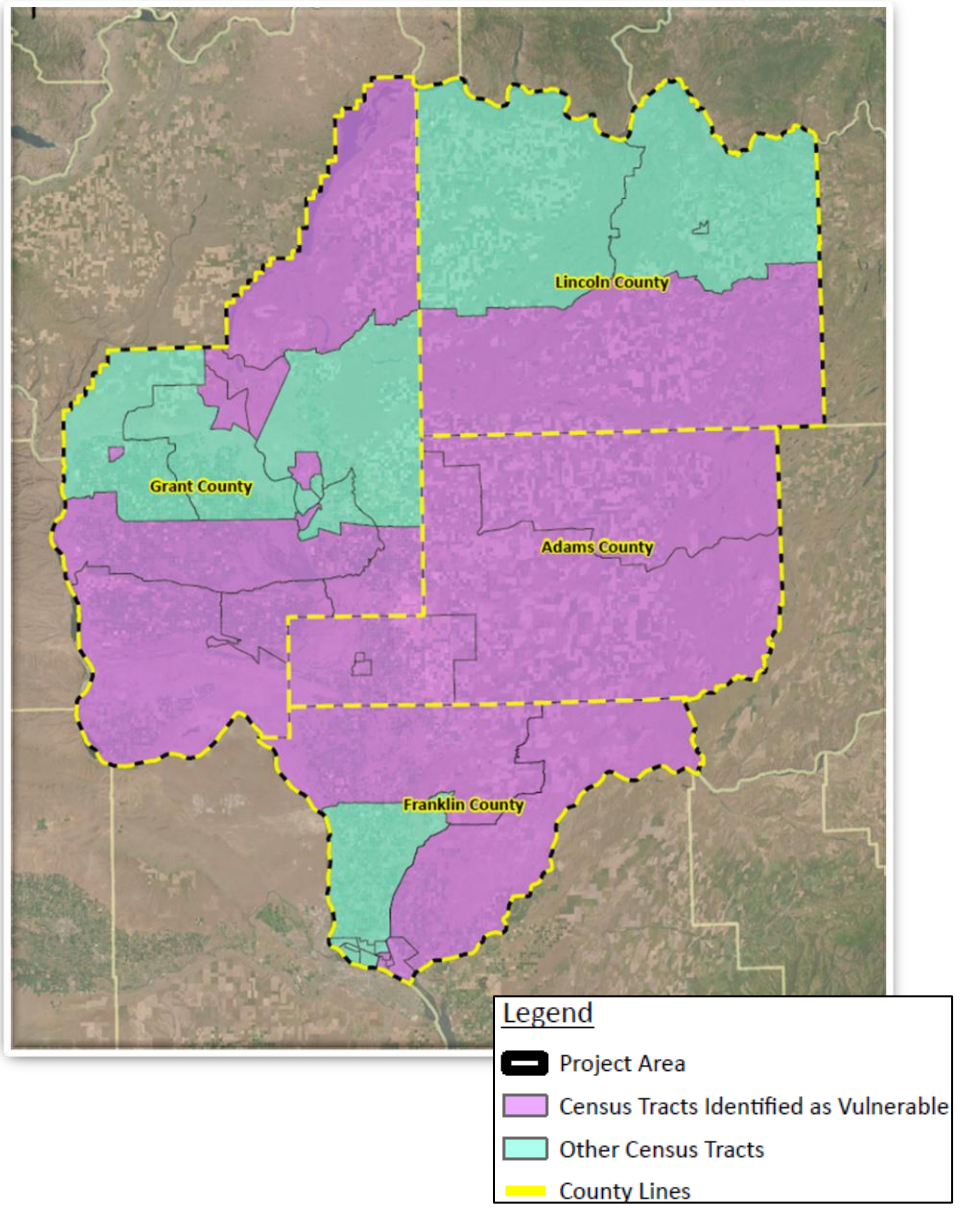


- Poverty
  - 12% of families - FLAG Counties
  - 6.5% of families – WA State



Vulnerable Communities

- **Vulnerable Communities**
  - *A population of people that is likely to be at a higher risk than normal for poor health outcomes in response to drought.*
- Socioeconomic Attributes
  - Low-income
  - Racial minorities
  - Language barriers
- Tools Used
  - Washington Environmental Health Disparities Map (EHD Map)
  - EJScreen (EPA)
  - Climate & Economic Justice Screening Tool (Council on Environmental Quality)

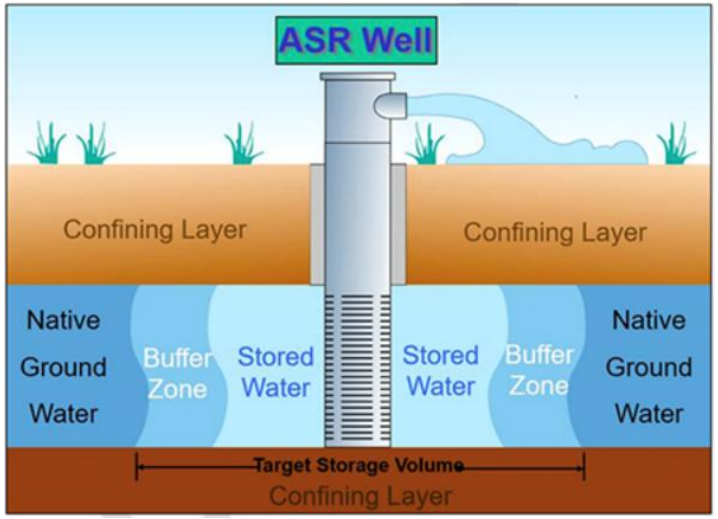


// Section 4: Water Security Risk Assessment

- Describe the water security risks and vulnerabilities of the planning area
- Summarize water availability and impacts on that availability due to drought
- Water demand factors
  - User characteristics
  - Population & growth forecasts
  - Drought impact on consumption
  - Surface supply factors
  - GW supply factors

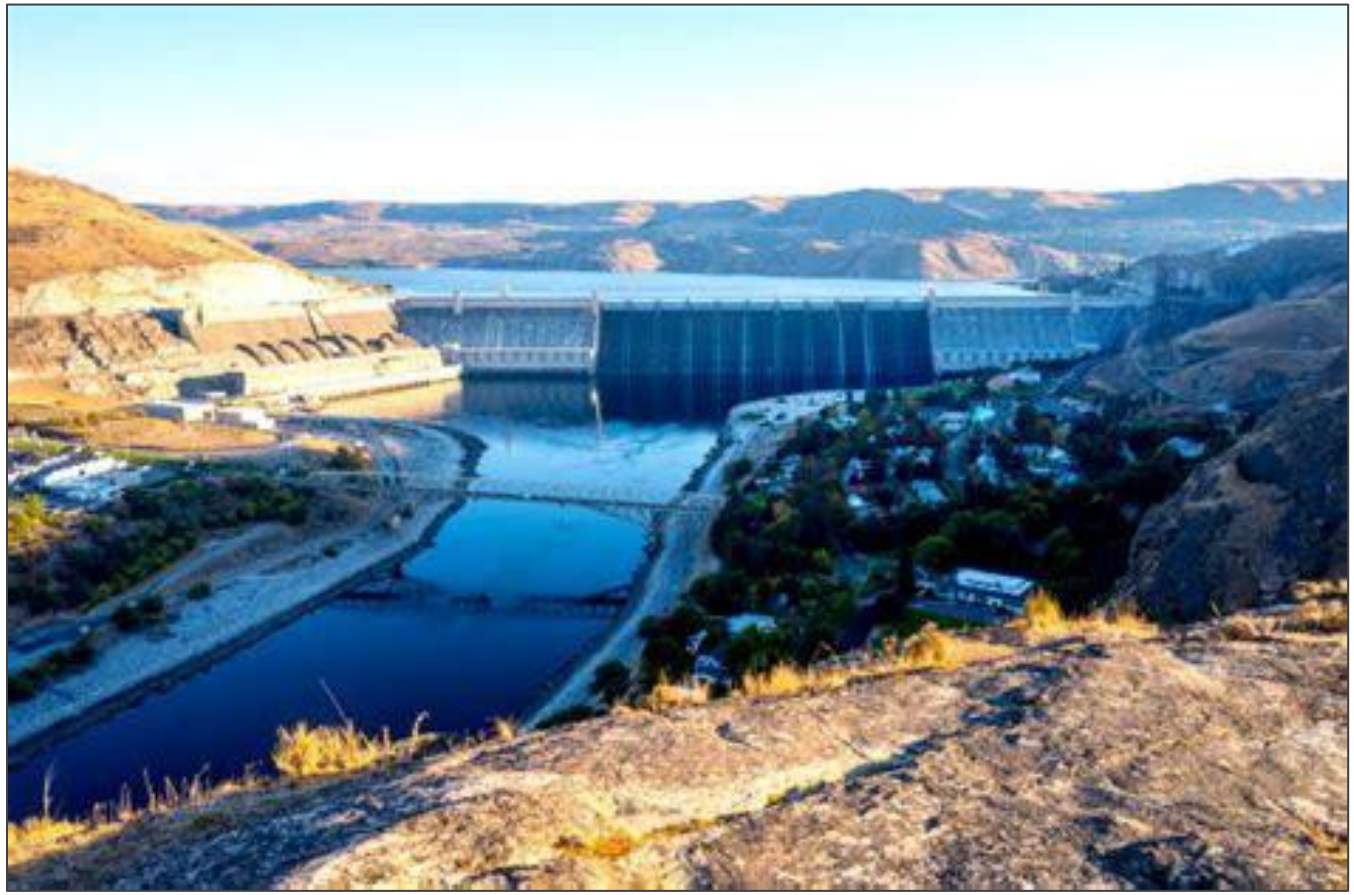
// Section 5: Water Supply & Drought Projects

- Identify current and potential projects and their intended benefit(s) that address the identified risks indicated in the risk assessment.
- Create Table – Columns as follows
  - Risk
  - Mitigation approach
  - Specific projects
  - Costs (including total)
  - Timeline for completion
  - Timeline for benefits
  - Funding status: funded, pursuing funding, funding identified + project readiness
  - For projects planned or in progress, include a reference to any that are included in existing plans, including capital plans or otherwise



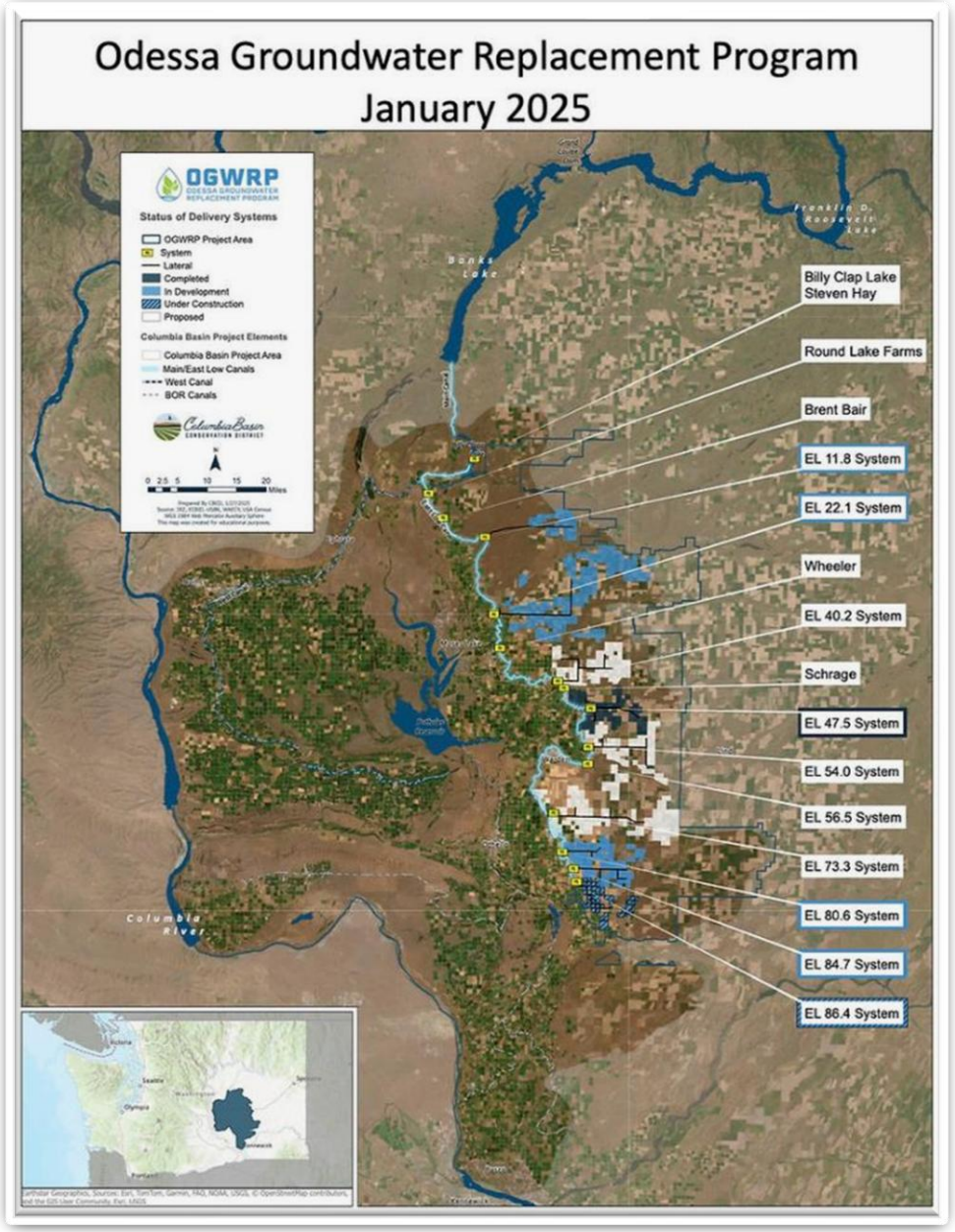
// Current and Future Actions

- Infrastructure Projects
- Resource Management Tools
- Funding
- Water Resource Planning



// Actions - Infrastructure Projects

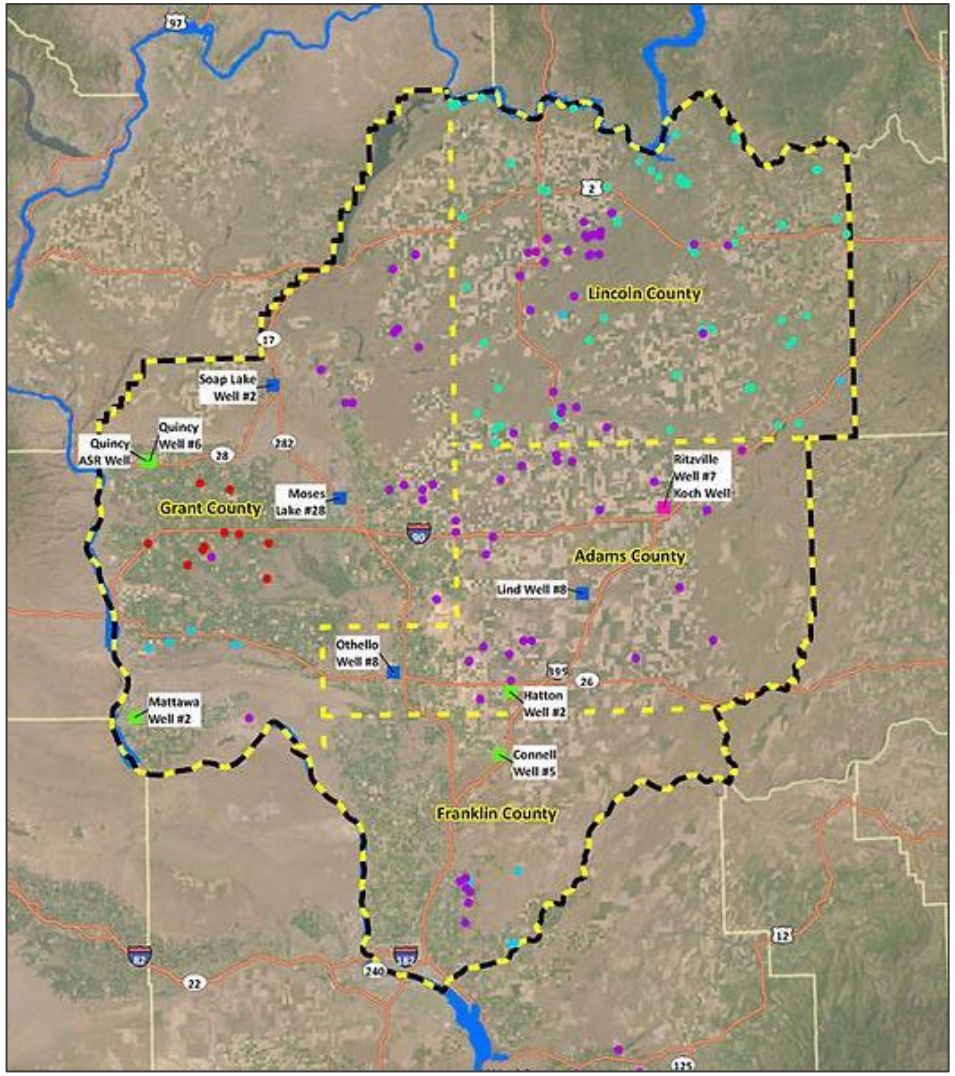
- CBP Completion; OGWRP
- New Source Treatment and Regional Distribution
- Water Conservation
- ASR
- Lake Roosevelt Incremental Storage Release Program
- Regionalization
  - E.g., Water system consolidation projects



// Actions - Water Resource Management Tools

- Groundwater Level Monitoring
- Numerical Groundwater Modeling
- Technical Assistance, ex: conservation districts
- Water Right Curtailment & Enforcement Actions
- Expedited Water Right Permitting & Leasing of Water Rights
- Forecast future water supplies and demand

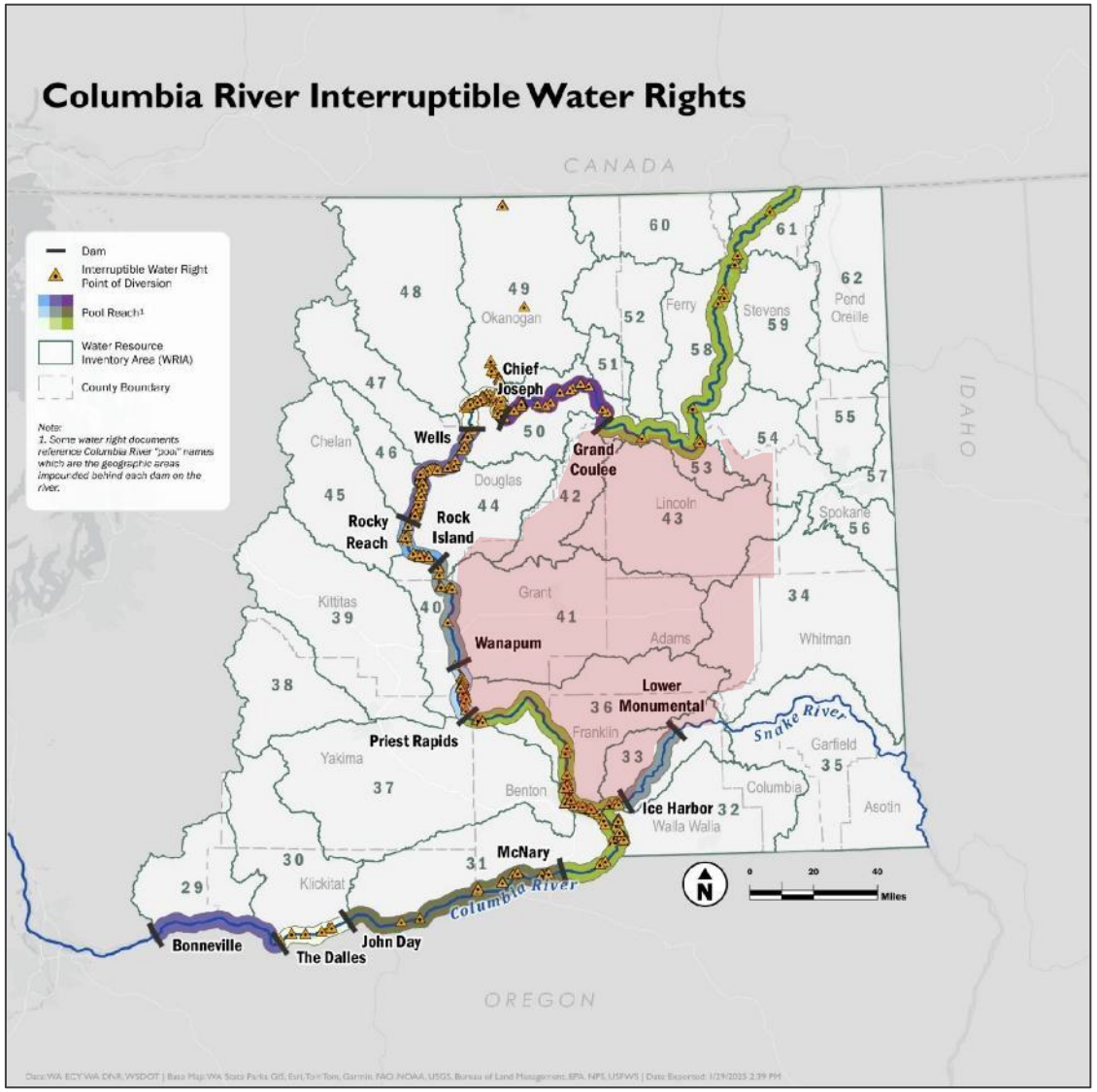
CBSWC Monitoring Wells



// Actions - Funding

- Funding Programs
- Budget sustainability
- Water leasing
- Insurance

Columbia River Drought Insurance Program



// Actions - Water Resource Planning

- Integrated water resource management planning programs
- Columbia Basin Sustainable Water Coalition (CBSWC)
- Water Management
- Bureau of Reclamation Basin Study
- Coordinated Water System Planning
- Local, State, and Federal Agency Coordination
- Partnership & Public Outreach
- Agriculture and water systems specific vulnerabilities and actions

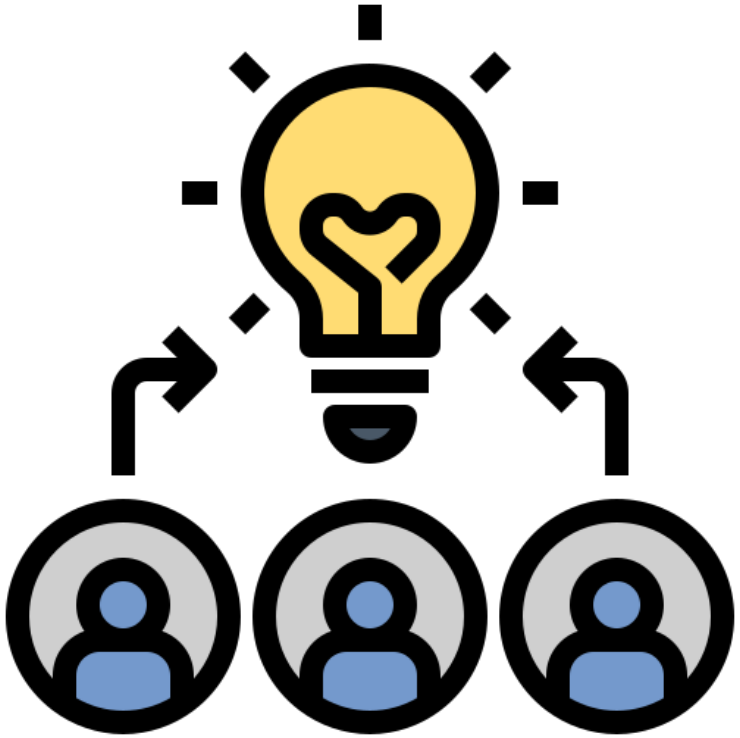
// Outreach

- The Community Engagement Plan
- Planned Outreach
  - Community Events (5-10)
  - Handouts
  - Newsletter articles (3-6)
  - Social posts (5-10)
  - Website –
    - https://www.lincolncd.com/mid-columbia-basin-drought-plan
  - Community Engagement Plan

// Outreach

- Receive input from the public
- What are the risks/hardships associated with drought & water supply that are affecting you?
- Project ideas/resources need?
- Project unintended consequences?

// Brainstorming Ahead →



Wrap Up; Mid-Columbia Basin Drought Plan

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- **When?** Feb 2025 – Feb 2027
- **Why?** "To incentivize and facilitate increased local drought preparedness, resiliency, and water supply security (Ecology 2023)."
- **Goals:**
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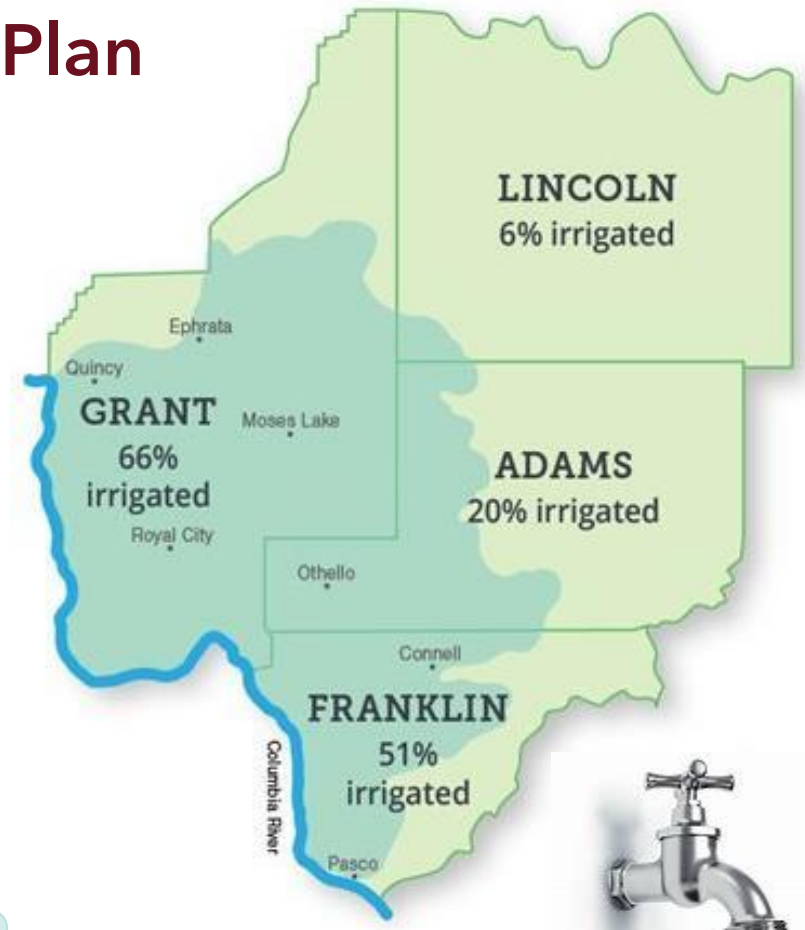
  - Help FLAG communities secure funding for project implementation
- **Funding:** Ecology Water Resources



80% of the Population relies on groundwater for drinking water


Thank you!
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