



# 2023 Integrated Water Resources Strategy (IWRS)

Oregon Technical Advisory Committee

November 9, 2023

Crystal Grinnell, IWRS Specialist

## Agenda

- IWRS Introduction
- Project Teams
- Project Timeline
- Outreach & Engagement
- Proposed IWRS Revisions
- Questions & Discussion



## Water Management in Oregon...

- 18 state agencies
- 10 federal agencies
- 9 sovereign tribes
- Local governments
- Utilities



# IWRS Introduction

## Timeline...

- Legislation calling for IWRS passed in 2009
- 2012, first IWRS
- Updates required every 5 years
- 2017, second IWRS
- Currently drafting the 2023 IWRS



# IWRS Project Teams

## State Agency Project Team

- Dept of Agriculture
- Dept of Environmental Quality
- Dept of Fish & Wildlife
- Dept of Land Conservation & Development



## Other

- Water Core Team
- Federal Liaison Team
- OWRD Team

# Legislative Changes

2023 Legislative Session resulted in:

- Requirement to produce biennial progress reports
- IWRS updates now required no more than every 8 years

# IWRS Update Timeline

**2023**

JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC

Public Input

Draft IWRS

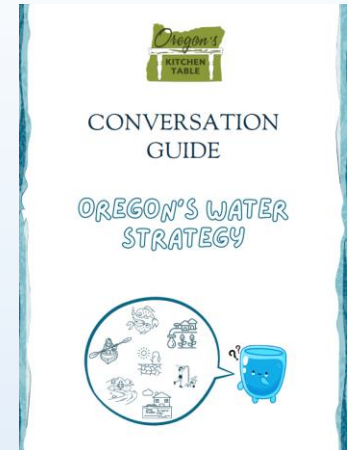
**2024**

JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC

Public review and comment, revisions, and WRC adoption timeline TBD

# Outreach & Engagement

- Facilitated Engagement
  - 7 In-person Community Conversations
  - 1 Virtual Community Conversation
  - Culturally-specific conversations
  - 3 Youth-specific events
- Self-led Conversations
- Public Survey (9 languages)



**Oregon's  
Kitchen Table  
Summary  
Report**

**July 17<sup>th</sup>**



# Outreach & Engagement

- Agency Survey
- Outreach/Consultation with Tribes
- State Agency Boards / Commissions



## Findings

- Urgency surrounding Oregon's water challenges
- Not enough water to meet instream and out-of-stream demands
- Call for more coordination
- Public wants more education surrounding water
- Access to safe & sufficient water is not equitably distributed
- Water rights: change vs status quo

Proposed  
IWRS  
Revisions

## What is missing?

- Historical context
- Tribal collaboration
- Climate change emphasis, including environmental justice implications
- Affordability and access
- Accountability
- Reports & Initiatives since 2017 (e.g., 100-Year Water Vision, Secretary of State Water Advisory Report, many others)



# Oregon's 2017 Integrated Water Resources Strategy

A framework for improving our understanding of Oregon's water resources and meeting our instream and out-of-stream needs, including water quantity, water quality, and ecosystem needs



## ( 1 ) Understand Water Resources Today

Further Understand Limited Water Supplies & Systems  
(groundwater, surface water, and their interaction)

Improve Water Quality & Quantity Information

Further Understand Our Water Management Institutions

### Understanding Water Resources / Supplies / Institutions

- 1.A Conduct additional groundwater investigations
- 1.B Improve water resource data collection & monitoring
- 1.C Coordinate inter-agency data collection, processing, and use in decision-making

← OBJECTIVES →

← CRITICAL ISSUES →

← RECOMMENDED ACTIONS →

## ( 2 ) Understand Instream and Out-of-Stream Needs

Further Define Out-of-Stream Needs / Demands  
(i.e., diverted water)

Further Define Instream Needs / Demands  
(i.e., left-in-place water)

### Understanding Oregon's Out-of-Stream Needs/Demands

- 2.A Regularly update long-term water demand forecasts
- 2.B Improve water-use measurement & reporting
- 2.C Determine adjudicated water right claims
- 2.D Authorize the update of water right records with contact information
- 2.E Regularly update Oregon's water-related permitting guide

### Understanding Oregon's Instream Needs/Demands

- 3.A Determine flows needed (quality & quantity) to support instream needs
- 3.B Determine needs of groundwater dependent ecosystems

← OBJECTIVES →

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## ( 3 ) Understand the Coming Pressures That Affect Our Needs and Supplies

Economic Development

Water & Energy

Climate Change

Extreme Events

Population Growth

Water & Land Use

Water-Related Infrastructure

Education & Outreach

### Water & Energy

- 4.A Analyze the effects on water from energy development projects & policies
- 4.B Take advantage of existing infrastructure to develop non-traditional hydroelectric power
- 4.C Promote strategies that increase/integrate energy & water savings

### Water & Land Use

- 6.A Improve integration of water information into land use planning (and vice versa)
- 6.B Improve state agency coordination
- 6.C Encourage low-impact development practices and green infrastructure

### Water-Related Infrastructure

- 7.A Develop and upgrade water and wastewater infrastructure
- 7.B Encourage regional (sub-basin) approaches to water and wastewater systems
- 7.C Ensure public safety/dam safety

### Education and Outreach

- 8.A Support Oregon's K-12 environmental literacy plan
- 8.B Provide education and training for Oregon's next generation of water experts
- 8.C Promote community education and training opportunities
- 8.D Identify ongoing water-related research needs

### Economic Development & Population Growth (See Actions 2A and 3A)

## ( 4 ) Meet Oregon's Instream and Out-of-Stream Needs

Place-Based Efforts

Water Management & Development

Healthy Ecosystems

Public Health

Funding

### Place-Based Efforts

- 9.A Continue to undertake place-based integrated, water resources planning
- 9.B Coordinate implementation of existing natural resource plans
- 9.C Partner with federal agencies, tribes, and neighboring states in long-term water resources management

### Water Management & Development

- 10.A Improve water-use efficiency and water conservation
- 10.B Improve access to built storage
- 10.C Encourage additional water reuse projects
- 10.D Reach environmental outcomes with non-regulatory alternatives
- 10.E Continue the water resources development program
- 10.F Provide an adequate presence in the field
- 10.G Strengthen water quantity & water quality permitting programs

### Healthy Ecosystems

- 11.A Improve watershed health, resiliency, and capacity for natural storage
- 11.B Develop additional instream protections
- 11.C Prevent and eradicate invasive species
- 11.D Protect and restore instream habitat and habitat access for fish and wildlife
- 11.E Develop additional groundwater protections

### Public Health

- 12.A Ensure the safety of Oregon's drinking water
- 12.B Reduce the use of and exposure to toxics and other pollutants
- 12.C Implement water quality pollution control plans

### Funding

- 13.A Fund development and implementation of Oregon's IWRS
- 13.B Fund water resources management activities at state agencies
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## ( 1 ) Understand Water Resources Today

Further Understand Limited Water Supplies & Systems

### Chapter 1 DATA, WATER SUPPLIES

← OBJECTIVES →

← CRITICAL ISSUES →

← RECOMMENDED ACTIONS →

## ( 2 ) Understand Instream and Out-of-Stream Needs

Further Define Out-of-Stream Needs / Demands (i.e. Groundwater)

### Chapter 2 DATA, WATER DEMANDS

Understanding Oregon  
2.A Regularly update  
2.B Improve water-use  
2.C Determine unadj  
2.D Authorize the up  
contact informati  
2.E Regularly update

Instream Needs/Demands  
led (quality & quantity) to  
ds  
groundwater dependent

← OBJECTIVES →

← CRITICAL ISSUES →

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Healthy Ecosystems

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### Chapter 4 SOLUTIONS

Water Management & Dev

10.A Improve water-use efficiency  
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## ( 3 ) Understand the Coming Pressures That Affect Our Needs and Supplies

Economic Development

Water & Energy

Climate Change

Extreme Events

Population Growth

Water & Land Use

Water-Related Infrastructure

Education & Outreach

### Chapter 3 PRESSURES

Water & Energy

4.A Analyze the effects on water from energy development projects  
4.B Take advantage of existing non-traditional hydro  
4.C Promote strategies that save water

Water & Land Use

6.A Improve integration of water information into land use planning (a) ion ment practices

Climate Change

5.A Support continued basic research efforts  
5.B Assist with climate change adaptation & resiliency strategies

Water-Related Infrastructure

7.C Ensure public safety/dam safety

Extreme Events

5.5A Plan and prepare for drought resiliency  
5.5B Plan and prepare for flood events  
5.5C Plan and prepare for a Cascadia subduction earthquake event

Education and Outreach

8.A Support Oregon's K-12 environmental literacy plan  
8.B Provide education and training for Oregon's next generation of water experts  
8.C Promote community education and training opportunities  
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Economic Development & Population Growth  
(See Actions 2A and 3A)

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- 1.A Conduct additional groundwater investigations
- 1.B Improve water resource data collection & monitoring
- 1.C Coordinate inter-agency data collection, processing, and use in decision-making

← OBJECTIVES →

← CRITICAL ISSUES →

## DATA & RESEARCH

RECOMMENDED  
← ACTIONS →

## ( 2 ) Understand Instream and Out-of-Stream Needs

Further Define Out-of-Stream Needs / Demands  
(i.e., diverted water)

Further Define Instream Needs / Demands  
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### Oregon's Out-of-Stream Needs/Demands

- 2.A Regularly update long-term water demand forecasts
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- 2.C Determine adjudicated water right claims
- 2.D Authorize the update of water right records with contact information
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### Understanding Oregon's Instream Needs/Demands

- 3.A Determine flows needed (quality & quantity) to support instream needs
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## PRESSURES

### Climate Change

- 5.A Support continued basin-scale climate change research efforts
- 5.B Assist with climate change adaptation & resiliency strategies

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- 7.A Develop and upgrade water and wastewater infrastructure
- 7.B Encourage regional (sub-basin) approaches to water and wastewater systems
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- 8.A Support Oregon's K-12 environmental literacy plan
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### Economic Development & Population Growth (See Actions 2A and 3A)

← OBJECTIVES →

← CRITICAL ISSUES →

RECOMMENDED  
← ACTIONS →

## ( 4 ) Meet Oregon's Instream and Out-of-Stream Needs

Place-Based Efforts

Water Management & Development

Healthy Ecosystems

Public Health

Funding

### Place-Based Efforts

- 9.A Continue to undertake place-based integrated, water resources planning
- 9.B Coordinate implement natural resource plans
- 9.C Partner with federal ag neighboring states in resources management

### Healthy Ecosystems

- 11.A Improve watershed health, resiliency, and capacity for natural resources
- 11.B Implement riparian zone protections

### Water Management & Development

- 10.A Improve water-use efficiency and water conservation
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- 10.C Encourage additional water reuse projects
- 10.D Reach environmental outcomes with non-regulatory alternatives
- 10.E Continue the water resources development program
- 10.F Provide an adequate presence in the field
- 10.G Strengthen water quantity & water quality permitting programs

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## SOLUTIONS

### Funding

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## Extreme Events

- 5.5A Plan and prepare for drought resiliency
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## Economic Development & Population Growth

*(See Actions 2A and 3A)*

## Water & Land Use

- 6.A Improve integration of water information into land use planning (and vice versa)
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# 2017 IWRS Framework

- Are issues under objective 3 to “understand coming pressures” future concerns?
- Can agencies and the public easily find actions they care about?
- Funding is needed for all objectives, but is located under objective 4 “meet Oregon’s instream and out-of-stream needs”
- Does organizing by objective still work?

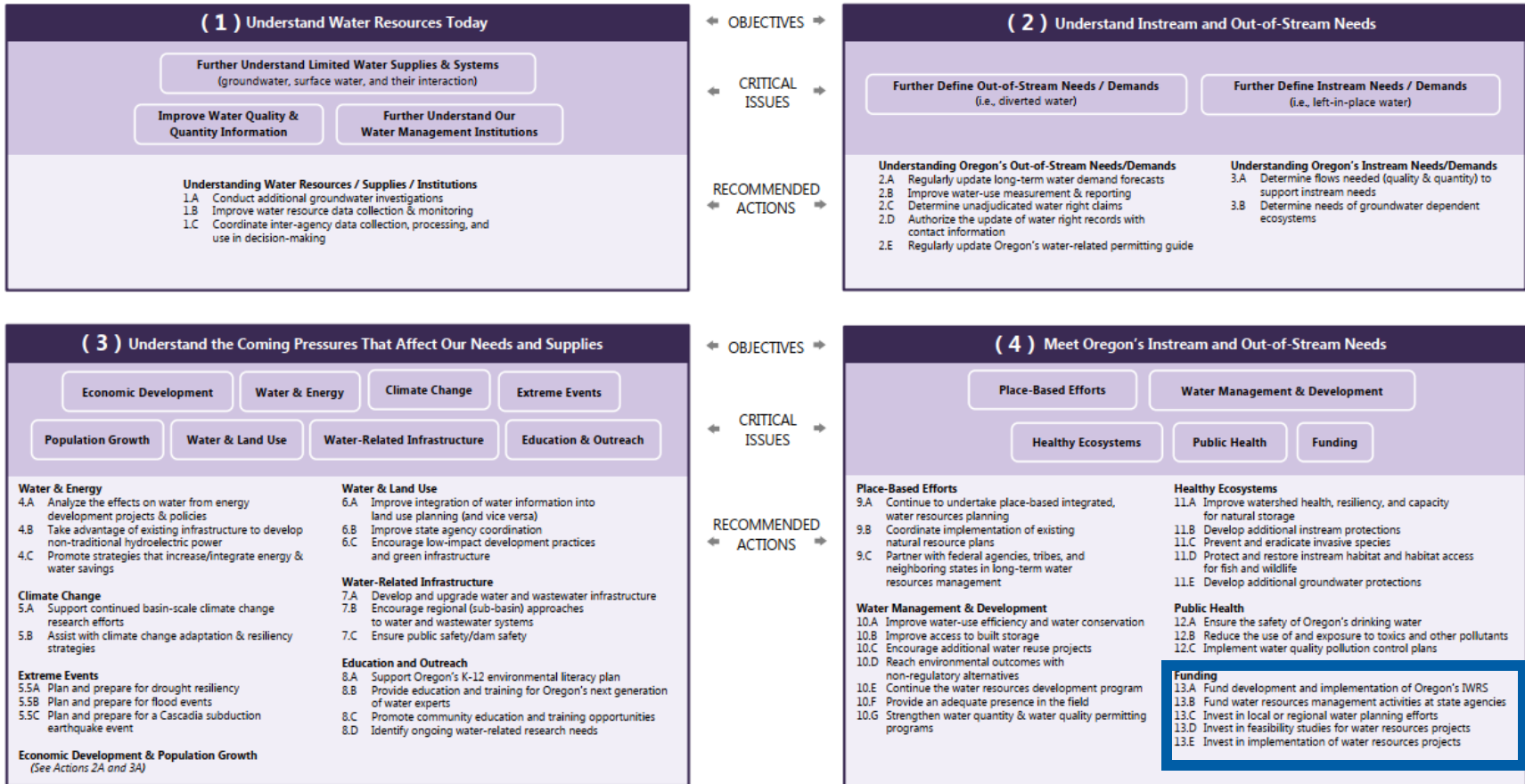
# Proposed 2023 IWRS Framework

- Minimal additions / deletions
- Re-organize by “types” of actions
  - Funding
  - Partnerships & Planning
  - Data & Research
  - Management & Stewardship
- Locate similar actions closer to one another
- Make it easier to find actions
- Add one new critical issue: Coordination & Collaboration

# Funding

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# Partnerships & Planning

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← OBJECTIVES →

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**Population Growth**      **Water & Land Use**      **Water-Related Infrastructure**      **Education & Outreach**

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**Place-Based Efforts**      **Water Management & Development**

**Healthy Ecosystems**      **Public Health**      **Funding**

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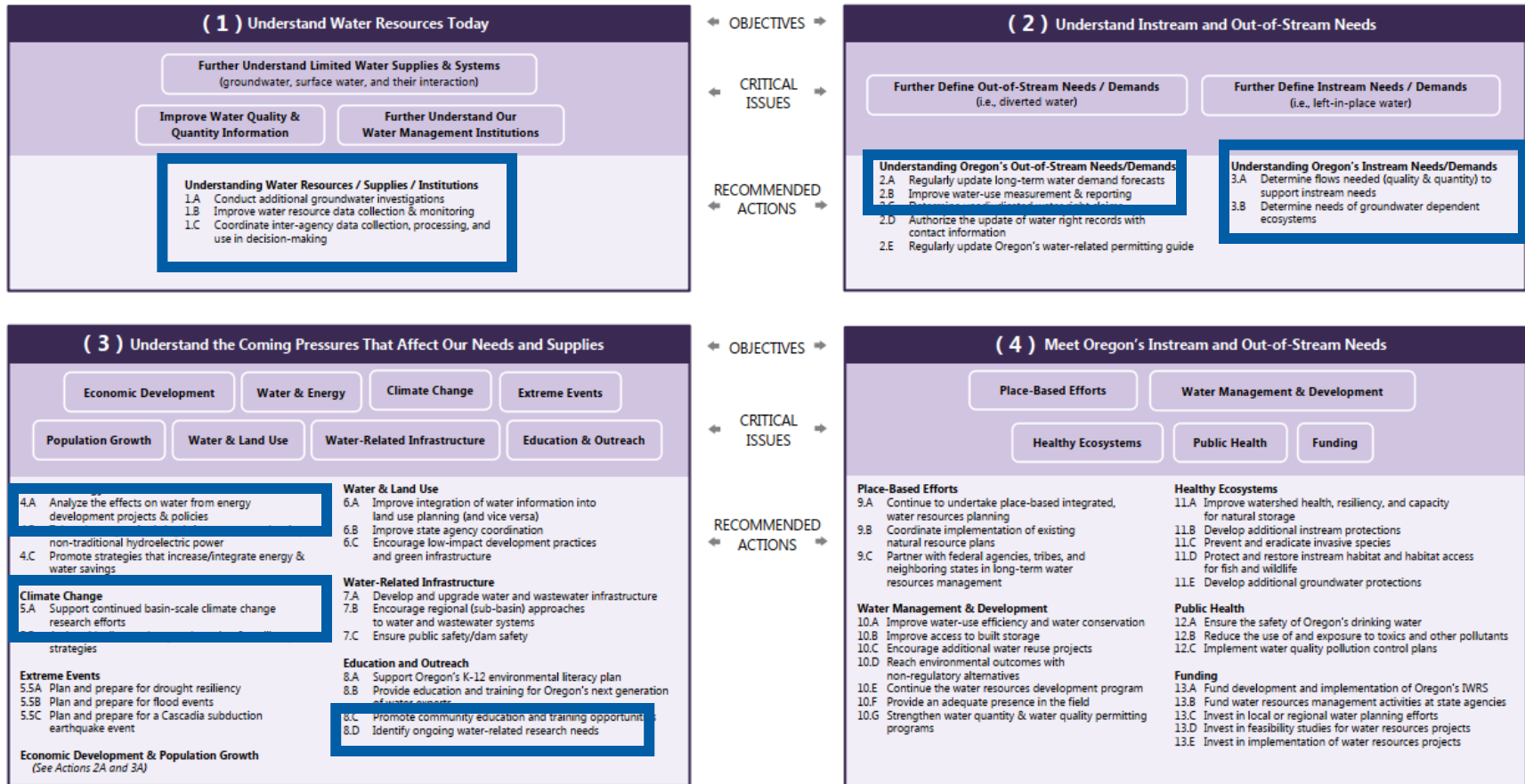
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# Data & Research

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# Management & Stewardship

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# Oregon's 2023 Integrated Water Resources Strategy Framework and Actions - 10/2023

Focusing on: Climate change, population growth, land use change, economic impacts, and energy demand

### Partnerships and Planning

**Education**  
 2A [8C] - Promote Community Education and Training Opportunities  
 2B [8A] - Support Implementation of K-12 Environmental Literacy Plan  
 2C [8B] - Provide Career Training for the Next Generation of Water Experts

**Coordination and Collaboration [new]**  
 3A [9C] - Partner with Federal Agencies, Tribes, and Neighboring States in Long-Term Water Resources Management  
 3B [6B] - Improve State Agency Coordination  
 3C [9B] - Coordinate Implementation of Existing State and Local Plans  
 3D [new] - Lead Meaningful Community Engagement

**Place-Based Efforts**  
 4A [9A] - Continue to Undertake Place-Based Planning

**Land Use Planning**  
 5A [6A] - Improve Integration of Water Information into Land Use Planning (& Vice-Versa)  
 5B [6C] - Encourage Low Impact Development Practices and Green Infrastructure

**Hazard Mitigation Planning and Extreme Events**  
 6A [5.5A] - Plan and Prepare for Drought and Wildfire Resiliency  
 6B [5.5B] - Plan and Prepare for Flood Events  
 6C [5.5C] - Plan and Prepare for a Cascadia Subduction Earthquake and Tsunami Event

Note: 2017 IWRS numbering is shown in [brackets].

### Identified Actions Address These Strategy Goals and Objectives:

**Goal 1: Improve Understanding of Oregon's Water Resources**

- Understand Water Resources Today
- Understand Instream and Out-of-Stream Needs
- Understand Coming Pressures That Affect Needs and Supplies

**Goal 2: Meet Oregon's Water Resources Needs**

- Meet Oregon's Instream and Out-of-Stream Needs

### Data and Research

**Water Quality and Quantity Data Needs**  
 7A [1B] - Improve Water Resource Data Collection and Monitoring  
 7B [1C] - Improve Inter-Agency Data Coordination  
 7C [1A] - Conduct Additional Groundwater Studies  
 7D [5A] - Support continued Basin-scale Climate Change Research  
 7E [8D] - Identify Ongoing Water-Related Research Needs and Partnerships

**Define Out-of-Stream Water Needs**  
 8A [2A] - Regularly Update Out-of-Stream Long-Term Water Demand Forecasts  
 8B [2B] - Improve Water-Use Measurement and Reporting

**Define Instream and Ecosystem Water Needs**  
 9A [3A] - Determine Flows Needed (Quality and Quantity) to Support Instream Needs  
 9B [3B] - Determine Needs of Groundwater Dependent Ecosystems  
 9C [4A] - Analyze the Effects on Water from Energy Development Projects and Policies

### Management and Stewardship

**Healthy Ecosystems**  
 10A [11A] - Improve Watershed Health, Resiliency, and Capacity for Natural Storage  
 10B [11B] - Develop Additional Instream Protections  
 10C [11C] - Prevent and Eradicate Invasive Species  
 10D [11D] - Protect and Restore Instream Habitat and Habitat Access for Fish and Wildlife  
 10E [11E] - Develop Additional Groundwater Protections

**Clean Water**  
 11A [12A] - Ensure the Safety of Drinking Water  
 11B [12B] - Reduce the Use of and Exposure to Toxics and Other Pollutants  
 11C [12C] - Implement Water Quality Pollution Control Plans

**Water Use and Management**  
 12A [2C] - Determine Unadjudicated Water Rights Claims  
 12B [10A] - Improve Water-Use Efficiency and Water Conservation  
 12C [10B] - Improve Access to Built Storage  
 12D [10C] - Encourage Water Reuse Projects  
 12E [10D] - Reach Environmental Outcomes with Non-Regulatory Alternatives  
 12F [10F] - Provide Adequate Field Staff  
 12G [10G] - Strengthen Water Quantity and Water Quality Permitting Programs

**Water Infrastructure**  
 13A [7A] - Maintain, Upgrade or Decommission Water and Wastewater Infrastructure  
 13B [7B] - Encourage Regional (Sub-Basin) Approaches to Water and Wastewater Systems  
 13C [7C] - Support Dam Safety Program  
 13D [new] - Utilize Natural Infrastructure

**Water and Energy**  
 14A [4B] - Use Existing Infrastructure to Develop Non-Traditional Hydroelectric Power  
 14B [4C] - Promote Strategies that Increase/Integrate Energy and Water Savings

### Funding

1A [13A] - Fund Development and Implementation of Oregon's Integrated Water Resources Strategy  
 1B [13B] - Fund Water Resources Management Activities at State Agencies  
 1C [13C-E] - Invest in Planning, Feasibility Studies, and Water Resource Project Implementation



## 2017 IWRS Recommended Action and Example Actions

### Recommended Action 3.A Determine Flows Needed (Quality and Quantity) to Support Instream Needs

#### Examples of how to implement this action:

- Prioritize and install gages in additional locations to monitor the status of instream flows and water rights
- Identify basins with listed species and install monitoring equipment to help characterize the suite of flows through these basins
- Conduct instream needs studies, such as base flow studies and elevated flow requirements or prescriptions
- Pursue a consistent, model-based framework for characterizing long-term instream demand and integrate projections of future climate for planning purposes
- Develop models/studies to quantify the economic, social, and cultural value of instream uses
- Support state agency instream flow efforts and programs (e.g., ODFW, ODEQ, OPRD)



## 2023 IWRS Proposed Action Summary

- Who
- Why
- Example actions
- Equity/Justice considerations
- Resources

### Healthy Ecosystems

### Action 10C Prevent and Eradicate Invasive Species

#### Lead Agencies

ODA, ODF, ODFW, OSMB

#### Supporting Agencies

USDA, USFS

#### Partners

Tribes, OSU Extension Service

#### Background

According to the Oregon Invasive Species Council, an invasive species is a non-native species that can cause economic or environmental harm or cause harm to human health. It can be a plant, animal, or any other microorganism that enters an ecosystem beyond its native range. Invasive species disrupt the natural function of an ecosystem by competing and replacing native species and disrupting the natural habitat.

Oregon experiences threats from invasive species in both aquatic and terrestrial ecosystems. Aquatic invasive species can flourish in waterways, reducing water quality, choking out native plants, and clogging boat, hydropower, and irrigation infrastructure. Native plant species in riparian and wetland areas adjacent to waterways are also under threat, limiting their capacity to provide benefits such as shade, shelter, and food. Invasive species can also impact the health of uplands, where well-managed forests are critical to protecting source water quality. Both agriculture and forestry industries require ongoing, consistent program support to identify and eradicate invasive species.

#### Example Actions

- Support and continue funding for the Aquatic Invasive Species Prevention Program
- **Identify and implement projects** to support the Oregon Conservation Strategy's seven statewide actions to prevent new introductions, and decrease the scale and spread of infestations
- Continue to implement and enforce ballast water management regulations
- **Provide technical assistance for invasive species detection and eradication on agricultural and forestlands**
- **Continue funding for invasive species eradication and native species restoration efforts (also see 10A)**

#### Equity & Justice Considerations and Actions

- **Consider impacts of invasive species on culturally significant plants, animals and [ecosystems](#)**

#### Resources

##### Agency Programs

ODA's Insect Pest Prevention and Management Program, ODF's Conservation Program, ODFW & OSMB's Aquatic Invasive Species (AIS) Prevention Program, ODF's Bark Beetle Mitigation Program

##### Workgroups

Oregon Invasive Species Council

##### Websites

[ODA Noxious Weed Profiles](#)

[ODA Insect Pest Alerts](#)

[USDA National Invasive Species Information Center](#)

##### Documents

[Oregon Conservation Strategy](#)



# What's Next

- IWRS Draft development with inter-agency project team
- Public review and comment on the Draft IWRS, likely in early 2024

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