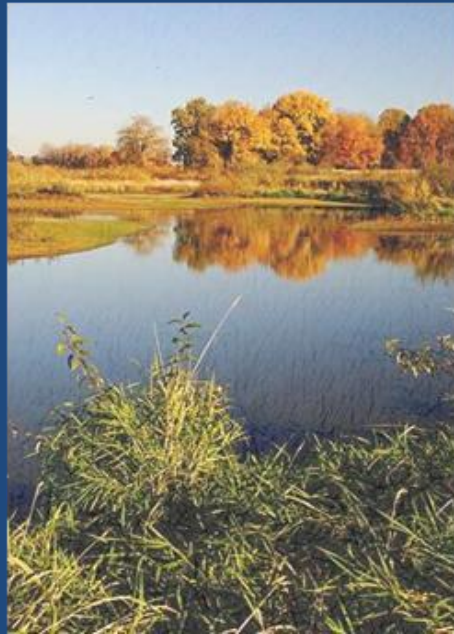
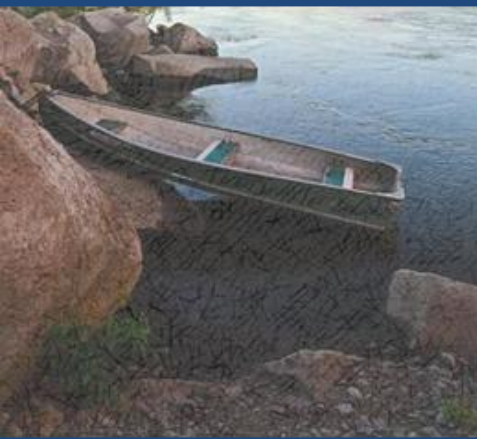
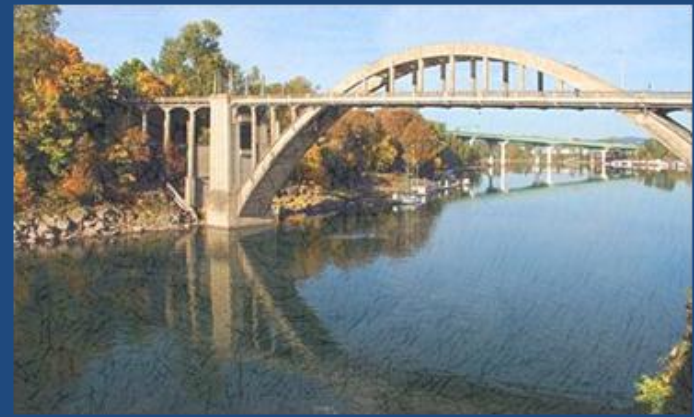


# Oregon's Integrated Water Resources Strategy



Environmental Quality Commission  
July 13, 2017 Meeting

# Outline of Today's Agenda Item



- Overview of the 2012 Integrated Water Resources Strategy
- What items are new in the 2017 public review draft
- Opportunity for public input
- What to expect this Summer and Fall



# The Charge to Develop the Strategy

## Oregon's House Bill 3369 (2009)

- Directed WRD to lead efforts to “understand and meet” Oregon’s water needs” →
- Partnered with water quality, fish & wildlife, agriculture, other agencies, tribes, stakeholders, & public
- Account for coming pressures



# Background on the 2017 Update



- IWRS must be updated every five years
- Other boards and commissions must be notified
- This update was designed to focus on shoring up existing recommended actions or adding new ones
- Governor Brown directed the agency to address drought
- Department continues to work closely with key partner agencies

# What has been retained?



- **Goals and objectives remain the same:**
  - **Goal 1: Improve our understanding of Oregon's water resources**
  - **Goal 2: Meet Oregon's water resources needs**
- **Guiding principles unchanged**
- **Critical issues remain the same, with one new addition**
- **General structure and format of the document**



# What has informed updates or changes?



- **New reports, data, or publications; examples:**
  - 2015 Demand Forecast
  - 2016 Monitoring Strategy
  - 2017 Climate Assessment Report
  - Governor's 2015 Executive Order on Drought
  - Others (see references throughout document)
- **Progress made in recent years; examples:**
  - Monitoring
  - Groundwater studies
  - Place-based planning
  - Funding programs (feasibility, grants and loans)
  - Instream efforts (e.g. scenic waterways)

# What has informed updates or changes? (cont.)

## Public and Agency Input:

- Open houses, online survey, public comment
- Policy Advisory Group discussions and recommendations
- State Agency Advisory Group input
- Partnerships and discussions with neighboring states
- Staff and Commission knowledge and expertise



# Organization of the Public Review Draft

- **Note to Reader**
- **Introduction**
- **Chapter 1 – Understand Water Resources Today**
- **Chapter 2 – Understand Instream and Out-of-Stream Needs**
- **Chapter 3 – Understand the Coming Pressures that Affect our Needs & Supplies**
- **Chapter 4 – Meet Instream and Out-of-Stream Needs**
- **Conclusion**
- **3 Appendices**

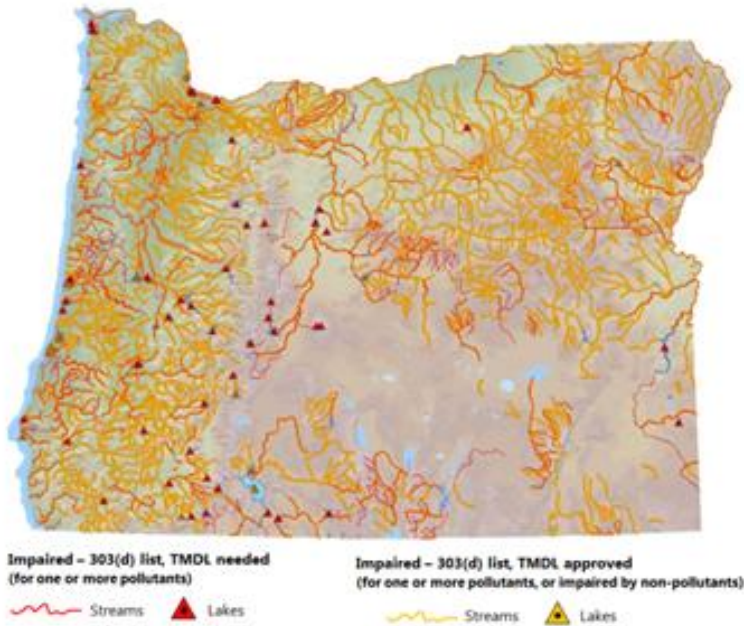


# Chapter 1 – Understand Water Resources Today

## Critical Issues:

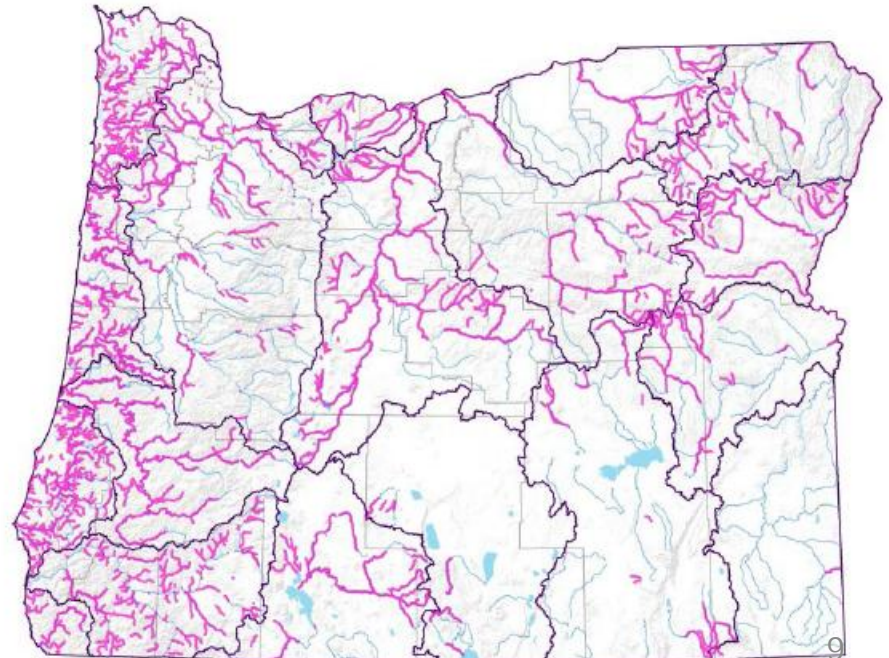
- Understand water supplies and systems (groundwater, surface water)
- Improve water quality and quantity information
- Further understand our water management institutions

**Figure 1-7: Surface Water Quality (2010)**  
Water Quality Limited Waters



Source: Oregon DEQ, Nov. 20, 2012

**Figure 1-11: Instream Water Rights**



# Chapter 2 – Understand Instream and Out-of-Stream Needs

**Critical Issue: Further define out-of-stream needs/demands**

- Discussion of out-of-stream uses (e.g., irrigation, municipal)
- Water use measurement
- Adjudications
- Water right records
- Water-related permitting processes

**Critical Issue: Further define instream needs/demands**

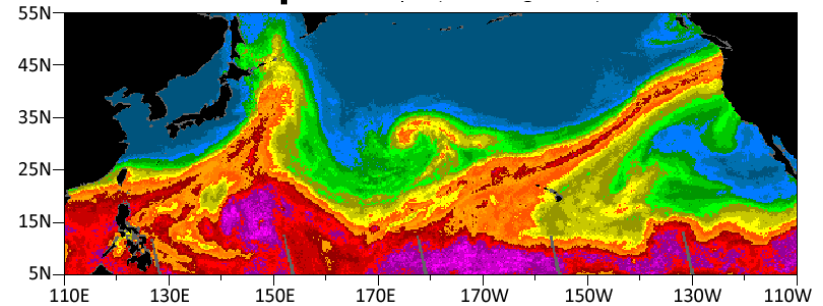
- Discussion of instream uses (e.g., recreation, tourism, fish & wildlife)
- Importance of instream flows (base flows & elevated flows)
- Groundwater dependent ecosystems

# Chapter 3 – Understand the Coming Pressures

## Critical Issues:

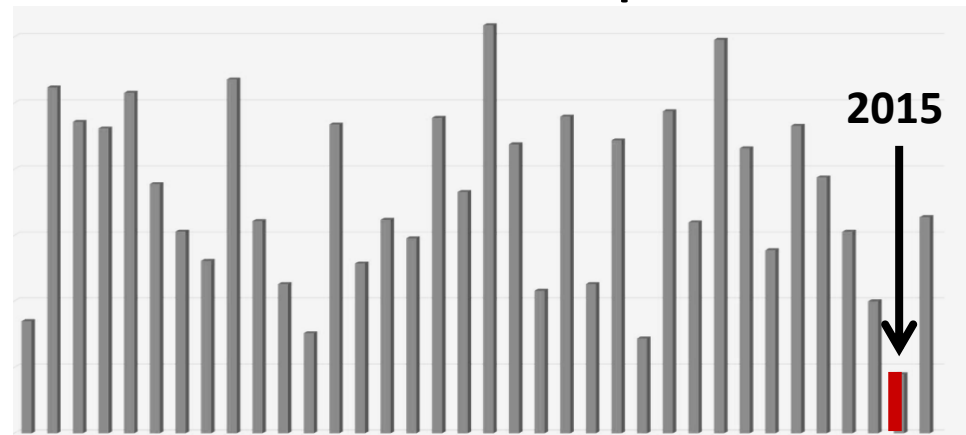
- Water and Energy
- Climate Change
- Extreme Events (new) (i.e., droughts, floods, earthquakes)
- Water and Land-Use
- Infrastructure (new dam safety action)
- Education & Outreach
- Economic Development
- Population Growth

### Atmospheric River Events



Source: NOAA Earth System Research Laboratory

### Peak Annual Snowpack



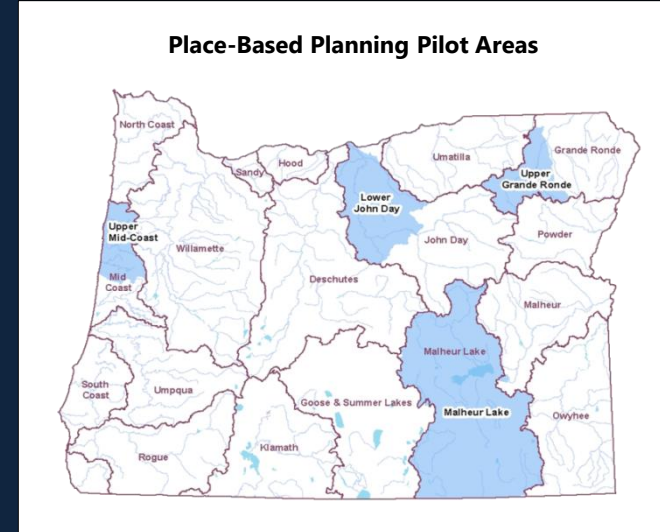
(Water Years 1981 - 2016)



# Chapter 4 – Meet Instream and Out-of-Stream Needs

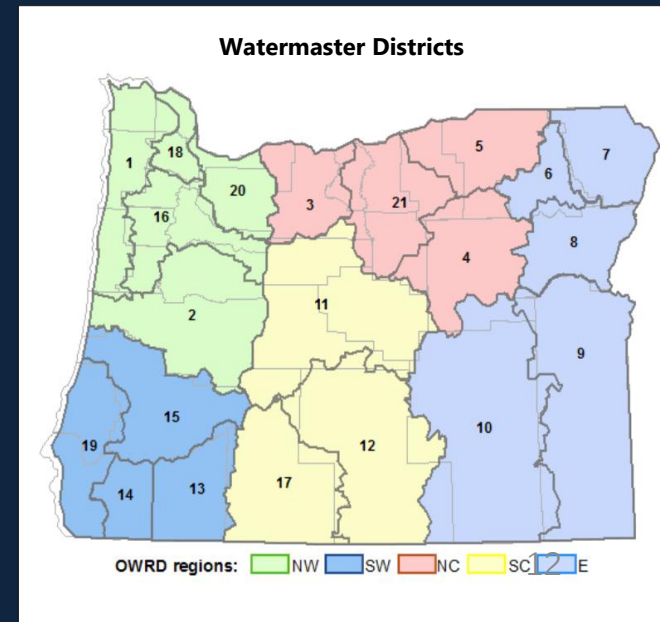
## Critical Issue: Place-Based Efforts

- Place-based planning
- Coordinate of existing plans
- Partner with federal agencies, tribes, and neighboring states



## Critical Issue: Water Management & Development

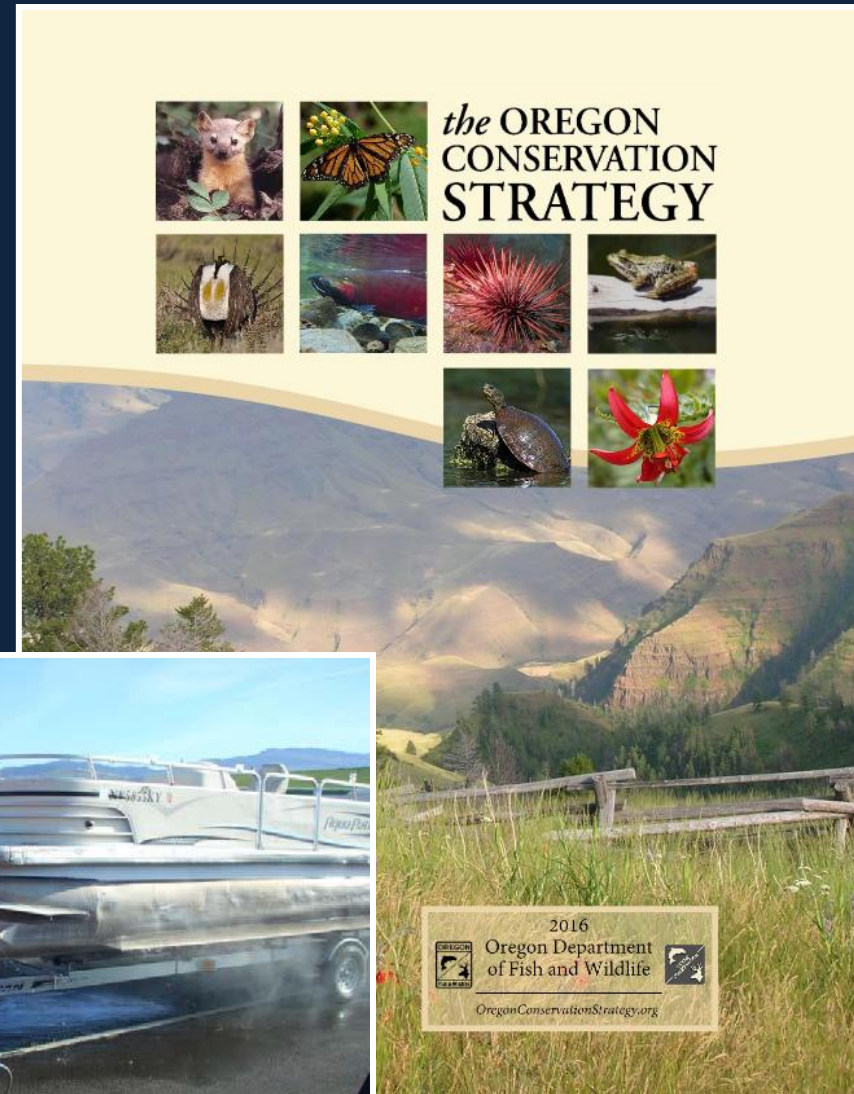
- Water use efficiency and conservation
- Storage
- Reuse
- Non-traditional approaches
- Water resources development
- Field presence (new)
- Permitting – quantity & quality (new)



# Chapter 4 – Meet Instream and Out-of-Stream Needs (cont.)

## Critical Issue: Healthy Ecosystems

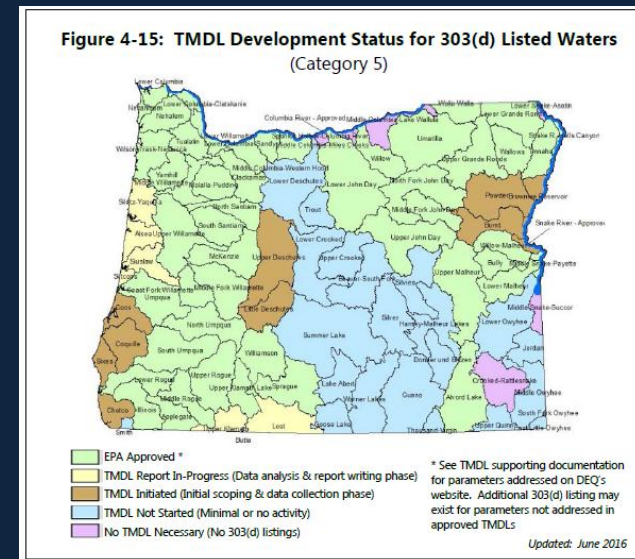
- Natural storage
- Instream protections
- Invasive species
- Habitat access  
(e.g., fish passage barriers)
- Groundwater protections (new)



# Chapter 4 – Meet Instream and Out-of-Stream Needs (cont.)

## Critical Issue: Public Health

- **Ensure safe drinking water (Action 12A)**
  - Source water protection
  - Domestic well testing
  - ORWARN
- **Reduce toxics and other pollutants (Action 12B)**
  - Toxics Reduction Strategy
  - Pesticide stewardship partnerships
  - Establish take-back programs
  - Improve monitoring (e.g. beaches)
- **Implement water quality plans (Action 12C)**
  - TMDLs plans and development
  - Address NPS pollutants
  - Increase monitoring





# Chapter 4 – Meet Instream and Out-of-Stream Needs (cont.)

## Critical Issue: Funding

- Fund development and implementation of the IWRS
- Invest in natural resources agencies
- Invest in local or regional water planning efforts (new)
- Invest in feasibility studies
- Invest in water projects (e.g. watershed restoration, offering grants/loans) (new)



# Where to Find Recommended Actions

## Throughout the Chapters:

in addition to preparedness and mitigation, this plan addresses emergency operations, as well as relief and recovery efforts. In early 2016, the Water Resources Department and the Office of Emergency Management updated Oregon's incident annex on drought, which is largely a response plan for state agency coordination activities.

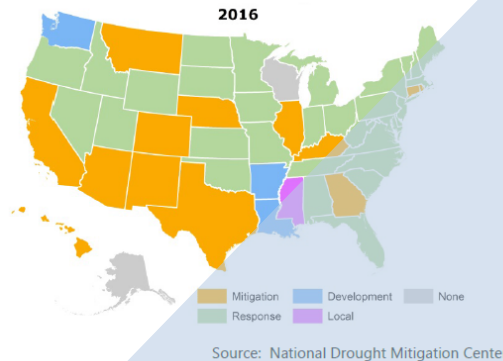
Most states either develop a mitigation or response plan for drought, or in some cases both (see Figure 3-7).

**Drought Early Warning System** – The National Integrated Drought Information System is a program authorized by Congress in 2006 to coordinate and integrate drought research and create a national drought early warning information system.

Regional early warning systems have been developed through partnerships with other federal, state, regional, local and private entities with the goal of helping stakeholders in the region cope with drought.

These early warning systems explore and demonstrate a variety of early warning and drought risk reduction strategies that incorporate drought monitoring and prediction information. The Pacific Northwest Drought Early Warning System includes the states of Idaho, Oregon, Washington and the western portion of Montana that feeds into the Columbia River Basin. Oregon representatives are participating in this group to learn about how other states in the Pacific Northwest are collecting drought-related information and using that to design drought plans, resiliency actions, and guide policy development.

Figure 3-7: Status of State Drought Plans



### Recommended Action 5.5A Plan and Prepare for Drought Resiliency

How to implement this action:

- Develop the appropriate set of indicators that signal differing stages of drought
- Document the economic, social, and environmental impacts of drought in Oregon, including the frequency, distribution, intensity and duration
- Prepare for, respond to, and mitigate for the impacts of water scarcity
- Assess and assist those communities most vulnerable to drought

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# Where to Find Recommended Actions

## Beginning of Each Chapter:

### Recommended Actions at a Glance

Critical Issue	Recommended Action
Water and Energy	4.A Analyze the Effects on Water from Energy Development Projects and Policies
	4.B Take Advantage of Existing Infrastructure to Develop Non-Traditional Hydroelectric Power <b>[Revised]</b>
	4.C Promote Strategies That Increase/Integrate Energy and Water Savings
Climate Change	5.A Support Continued Basin-Scale Climate Change Research Efforts
	5.B Assist with Climate Change Adaptation and Resiliency Strategies
Extreme Events	5.5A Plan and Prepare for Drought Resiliency <b>[New]</b>
	5.5B Plan and Prepare for Flood Events <b>[New]</b>
	5.5C Plan and Prepare for Cascadia Subduction Earthquake Event <b>[New]</b>
Water and Land Use	6.A Improve Integration of Water Information into Land Use Planning (& vice-versa)
	6.B Improve State Agency Coordination <b>[Revised]</b>
	6.C Encourage Low Impact Development Practices and Green Infrastructure <b>[Revised]</b>
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 <b>[New]</b>
Education and Outreach	8.A Support Implementation of 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



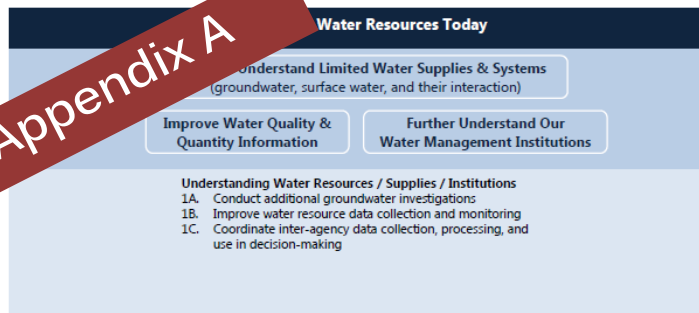
# Where to find Recommended Actions

## Noted on the IWRS Framework:

### Oregon's Integrated Water Resources Strategy Framework

See Appendix A

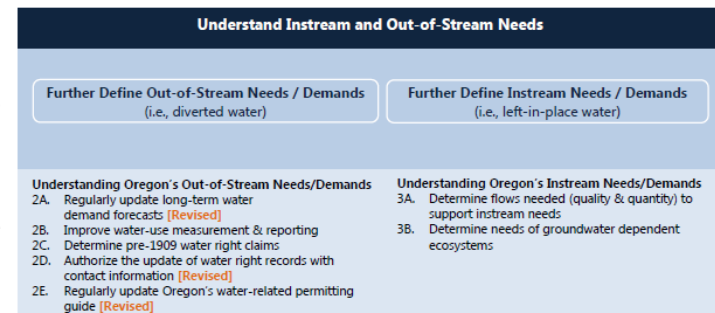
Appendix A | Public Review Draft, April 19, 2017



OBJECTIVES

CRITICAL ISSUES

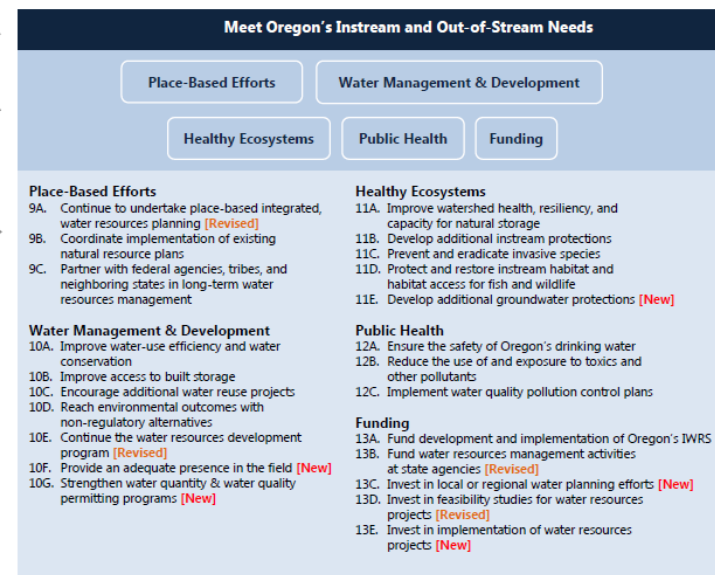
RECOMMENDED ACTIONS



OBJECTIVES

CRITICAL ISSUES

RECOMMENDED ACTIONS



# Revised Recommended Actions at a Glance

- 2A. Regularly update long-term water demand forecasts
- 2D. Authorize the update of water right records with contact information
- 2E. Regularly update Oregon's water-related permitting guide
- 4B. Take advantage of existing infrastructure to develop non-traditional hydroelectric power
- 6B. Improve state agency coordination
- 6C. Encourage low-impact development practices and green infrastructure
- 9A. Continue to undertake place-based integrated, water resources planning
- 10E. Continue the water resources development program
- 13B. Fund water resources management activities at state agencies
- 13D. Invest in feasibility studies for water resources projects

# New Recommended Actions at a Glance

## EXTREME EVENTS:

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

## WATER-RELATED INFRASTRUCTURE:

- 7C. Ensure public safety/dam safety

## WATER MANAGEMENT & DEVELOPMENT:

- 10F. Provide an adequate presence in the field
- 10G. Strengthen water quantity & water quality permitting programs

## HEALTHY ECOSYSTEMS:

- 11E. Develop additional groundwater protections

## FUNDING:

- 13C. Invest in local or regional water planning efforts
- 13E. Invest in implementation of water resources projects



# Opportunities for Public Input

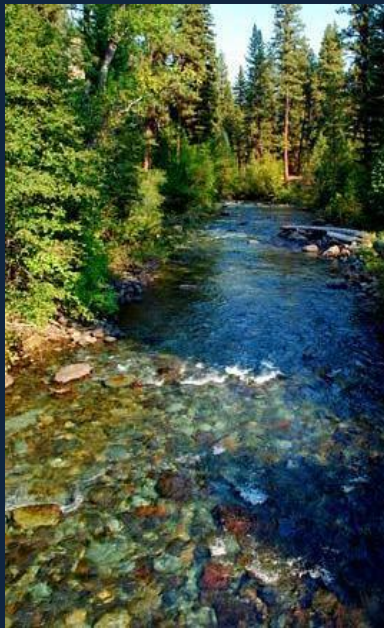


- Public review draft distributed through IWRS mailing list, shared with agency partners, other boards/commissions
- Posted on the WRD homepage
- Comments due by Wednesday, July 19
- Stakeholders, organizations, agencies, and boards have invited staff for briefings
- Public comments accepted all Water Resources Commission meetings

# What to Expect this Summer and Fall

- **Compile and review the public input**
- **State Agency Advisory Group will do a second review**
- **Public comments shared with Water Resources Commission in mid-August**
- **Water Resources Commission will be asked to adopt the 2017 Strategy in mid-November**

# Comments or Questions?



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**503-986-0911**