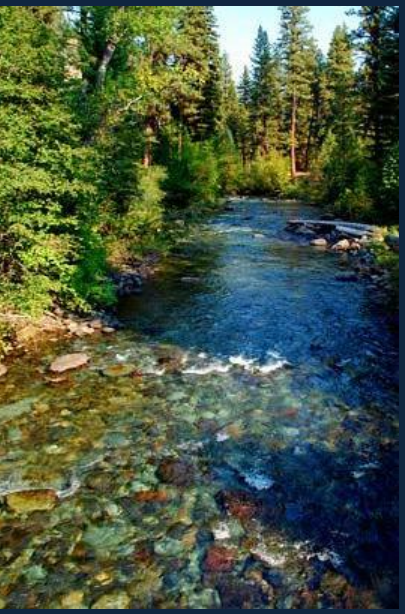
Oregon's 2017 Integrated Water Resources Strategy

PUBLIC REVIEW DRAFT
April 19, 2017

Outline of Today's Agenda Item



- Walk-thru of the Public Review Draft
- Opportunity for public input
- Updates to Boards and Commissions
- What to expect this Summer and Fall

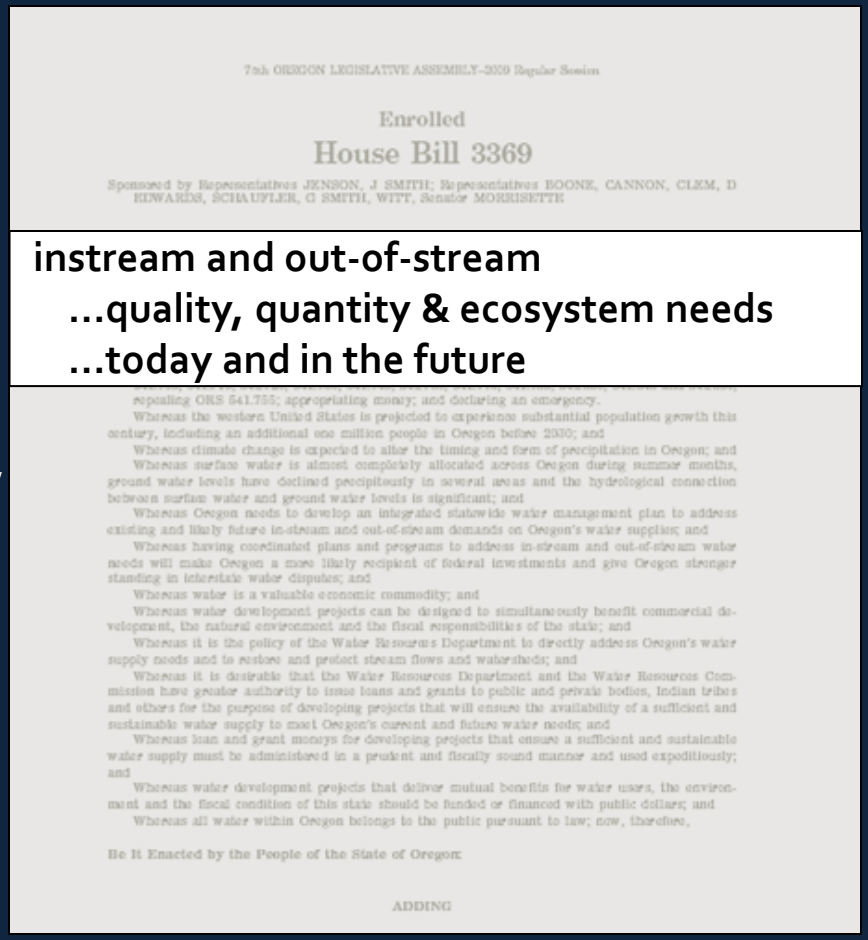
The Charge to Develop the Strategy

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



74th OREGON LEGISLATIVE ASSEMBLY–2009 Regular Session

Enrolled

House Bill 3369

Sponsored by Representatives JENSON, J SMITH; Representatives BOONE, CANNON, CLEM, D EDWARDS, SCHAUFLER, G SMITH, WITT, Senator MORRISETTE

instream and out-of-stream
…quality, quantity & ecosystem needs
…today and in the future

repealing ORS 541.755; appropriating money; and declaring an emergency.

Whereas the western United States is projected to experience substantial population growth this century, including an additional one million people in Oregon before 2030; and

Whereas climate change is expected to alter the timing and form of precipitation in Oregon; and

Whereas surface water is almost completely allocated across Oregon during summer months, ground water levels have declined precipitously in several areas and the hydrological connection between surface water and ground water levels is significant; and

Whereas Oregon needs to develop an integrated statewide water management plan to address existing and likely future in-stream and out-of-stream demands on Oregon's water supplies; and

Whereas having coordinated plans and programs to address in-stream and out-of-stream water needs will make Oregon a more likely recipient of federal investments and give Oregon stronger standing in interstate water disputes; and

Whereas water is a valuable economic commodity; and

Whereas water development projects can be designed to simultaneously benefit commercial development, the natural environment and the fiscal responsibilities of the state; and

Whereas it is the policy of the Water Resources Department to directly address Oregon's water supply needs and to restore and protect stream flows and watersheds; and

Whereas it is desirable that the Water Resources Department and the Water Resources Commission have greater authority to issue loans and grants to public and private bodies, Indian tribes and others for the purpose of developing projects that will ensure the availability of a sufficient and sustainable water supply to meet Oregon's current and future water needs; and

Whereas loan and grant moneys for developing projects that ensure a sufficient and sustainable water supply must be administered in a prudent and fiscally sound manner and used expeditiously; and

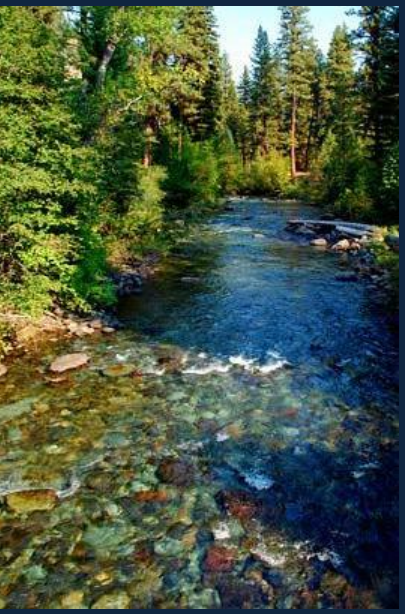
Whereas water development projects that deliver mutual benefits for water users, the environment and the fiscal condition of this state should be funded or financed with public dollars; and

Whereas all water within Oregon belongs to the public pursuant to law; now, therefore,

Be It Enacted by the People of the State of Oregon:

ADDING

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)
  - Scenic waterways

What has informed updates or changes? (cont.)

Public and Agency Input:

- 2016 open houses & online survey
- Policy Advisory Group discussions and recommendations
- State Agency Advisory Group input
- Partnerships and discussions with neighboring states
- Staff knowledge and expertise

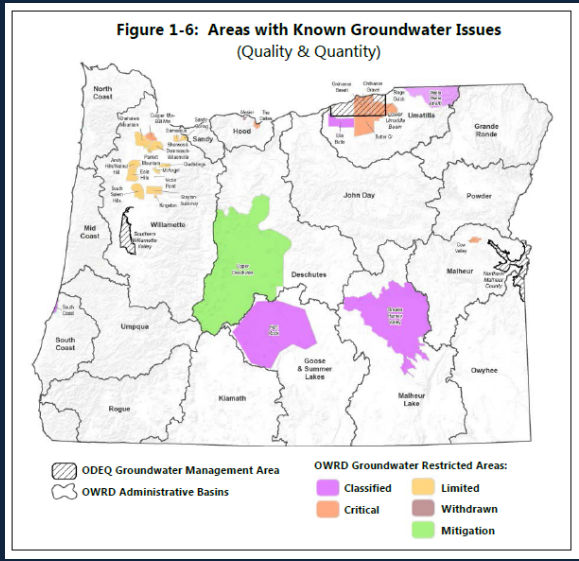
Organization of the Public Review Draft

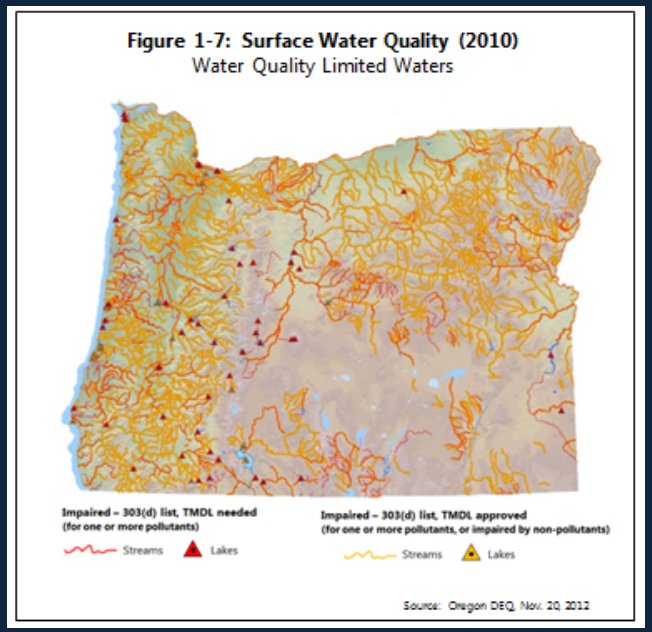
- Note to Reader
- Introduction
- Chapter 1 – Understand Water Resources Today
- Chapter 2 – Understand Instream and Out-of-Stream Needs
- Chapter 3 – Understand the Coming Pressures that Affect our Needs & Supplies
- Chapter 4 – Meet Instream and Out-of-Stream Needs
- Conclusion
- 3 Appendices

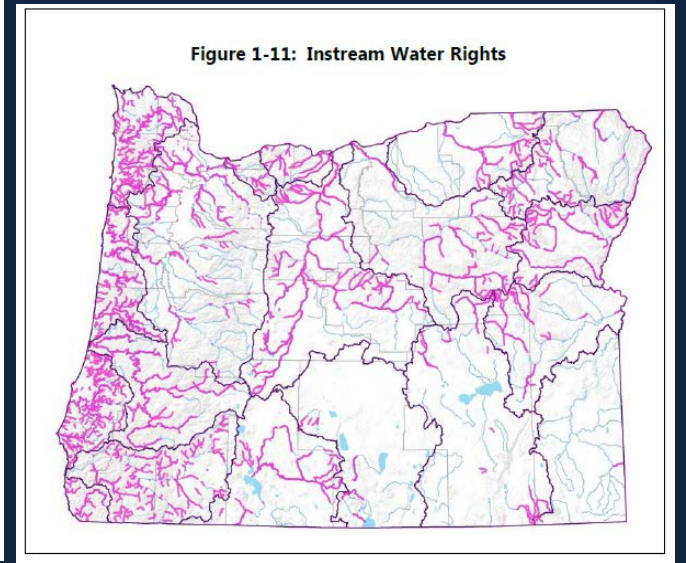
Chapter 1 – Understand Water Resources Today

Critical Issues in Chapter 1:

- Understand water supplies and systems
- Improve water quality and quantity information
- Further understand our water management institutions



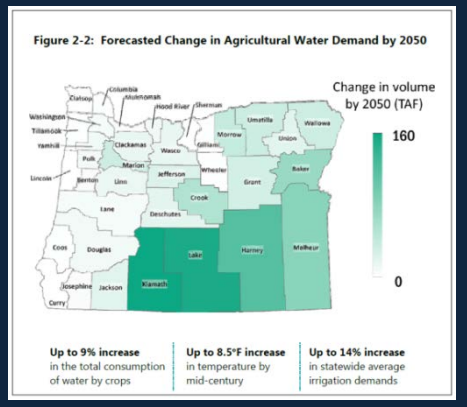


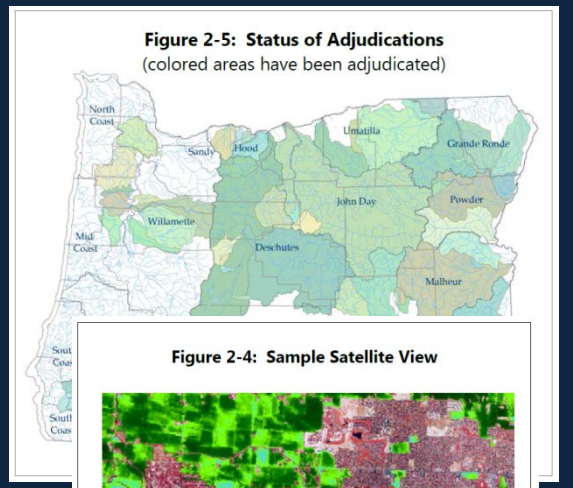


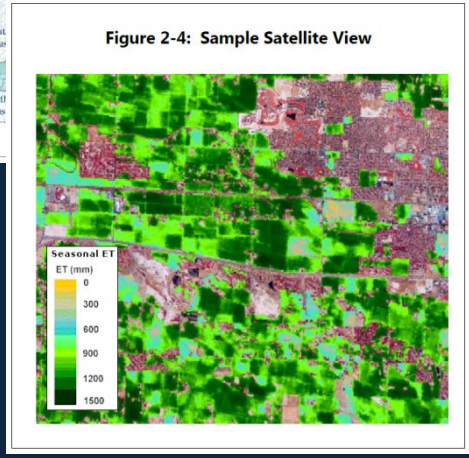
Chapter 2 – Understand Instream and Out-of-Stream Needs

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

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







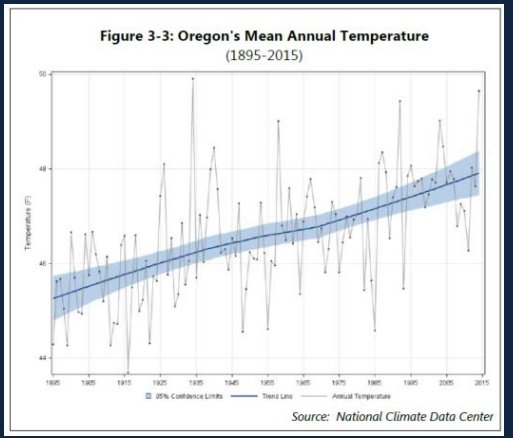
Critical Issue: Further define instream needs/demands

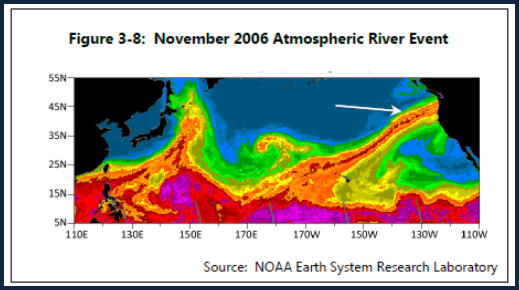
- Discussion of instream uses (navigation, recreation, tourism, fisheries, base flows & elevated flows)
- Groundwater dependent ecosystems

Chapter 3 – Understand the Coming Pressures that Affect our Needs and Supplies

Critical Issues in Chapter 3:

- Water and energy
- Climate change
- Extreme events
  (i.e., droughts, floods, earthquakes)
- Water and land-use
- Water-related infrastructure
  (includes new section on dam safety)
- Education and outreach





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

Critical Issue: Place-based efforts

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

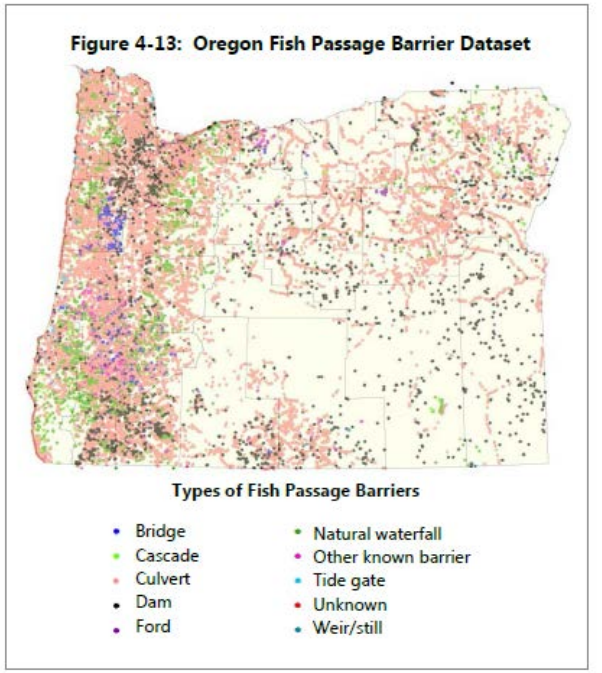
Critical Issue: Water management and development

- Water use efficiency and water 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

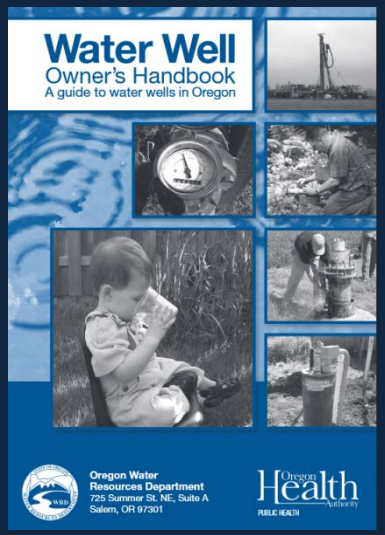
- Natural storage
- Instream protections
- Invasive species
- Habitat access
  (e.g., fish passage barriers)
- Groundwater protections

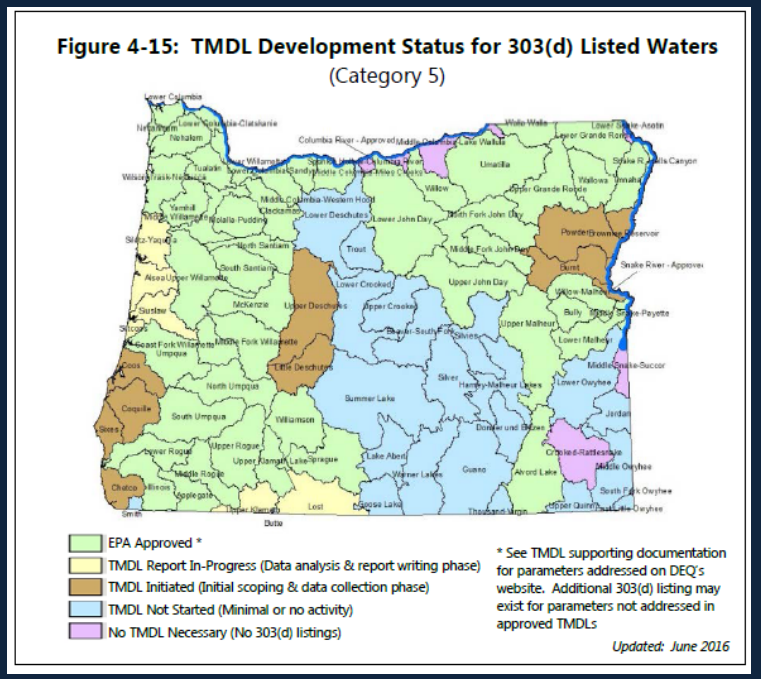


Chapter 4 – Meet Instream and Out-of-Stream Needs (cont.)

Critical Issue: Public Health

- Drinking water (e.g., source water protection)
- Toxics reduction (e.g., pesticide stewardship partnerships)
- TMDL plans and development





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
- Invest in feasibility studies
- Invest in projects (e.g. watershed restoration, offering grants/loans)

Where to find Recommended Actions

Throughout the Chapters:

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).

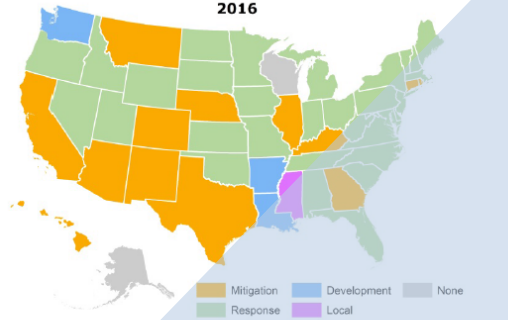
Drought Early Warning System – The National Integrated Drought Information System is a program authorized by Congress in 2006 to coordinate and integrate drought research and create a national drought early warning information system.

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

2016



Source: National Drought Mitigation Center

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

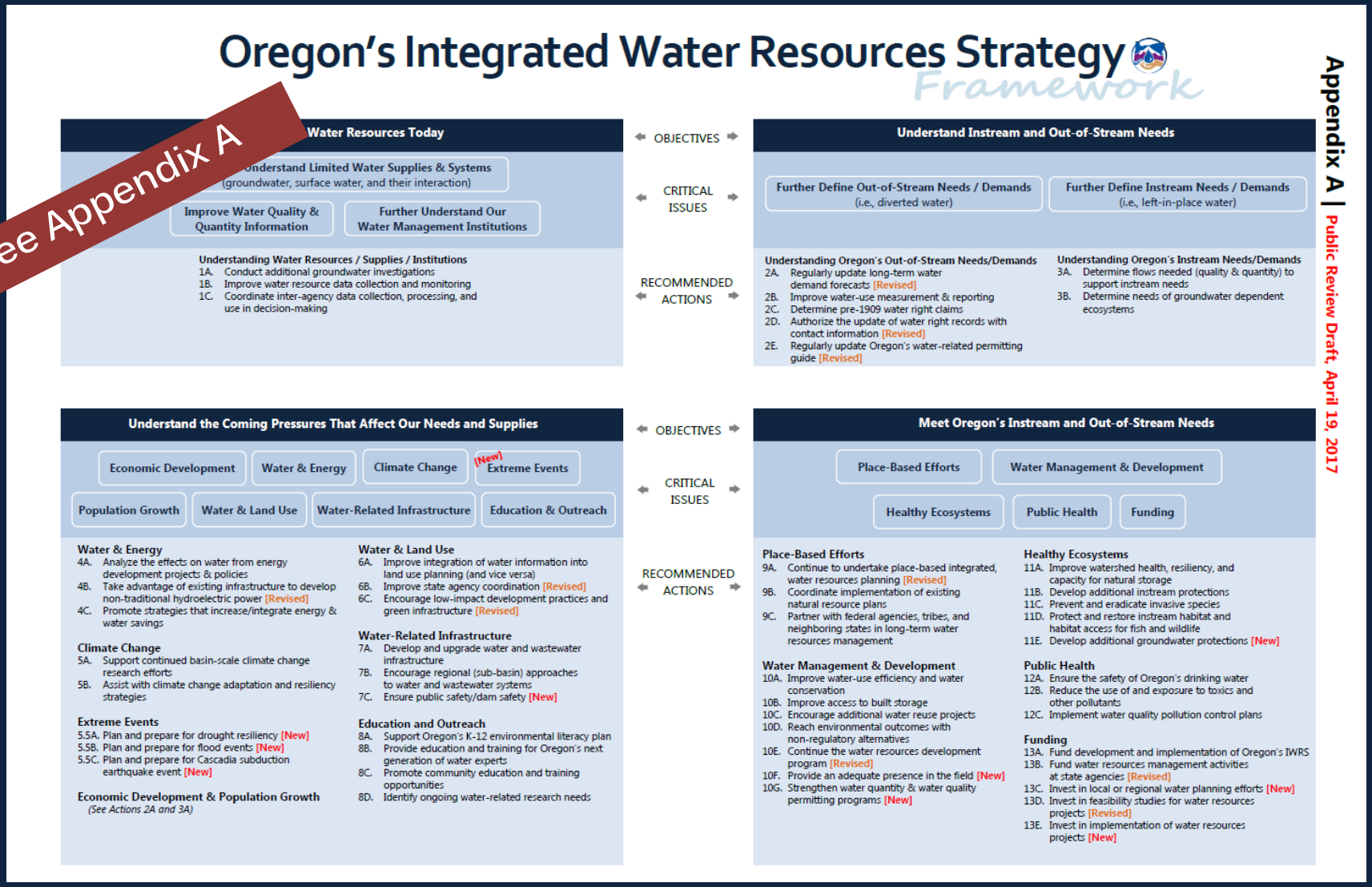
Beginning of Each Chapter:

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 **[Revised]** 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 **[New]** 5.5B Plan and Prepare for Flood Events **[New]** 5.5C Plan and Prepare for Cascadia Subduction Earthquake Event **[New]**
Water and Land Use	6.A Improve Integration of Water Information into Land Use Planning (& vice-versa) 6.B Improve State Agency Coordination **[Revised]** 6.C Encourage Low Impact Development Practices and Green Infrastructure **[Revised]**
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 **[New]**
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:



Revised Recommended Actions

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 ~~plans~~

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

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

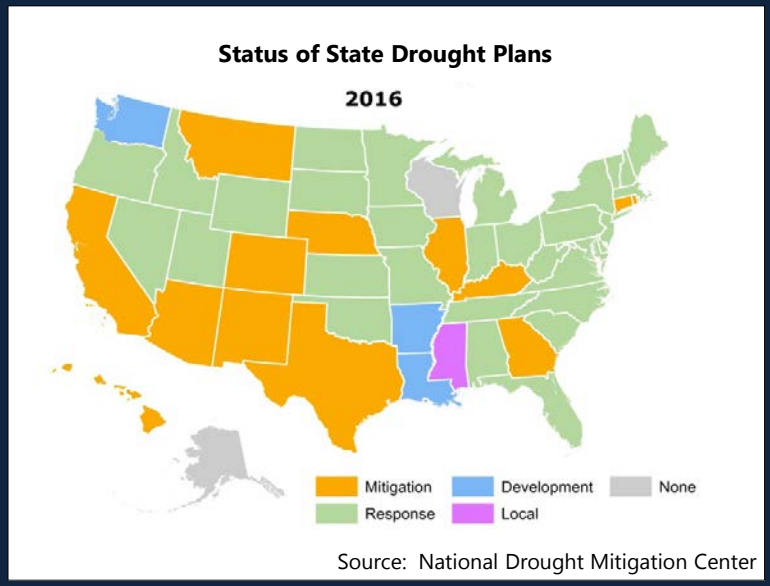
New Recommended Actions: Extreme Events

[Begins on page 63]

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



Source: National Drought Mitigation Center

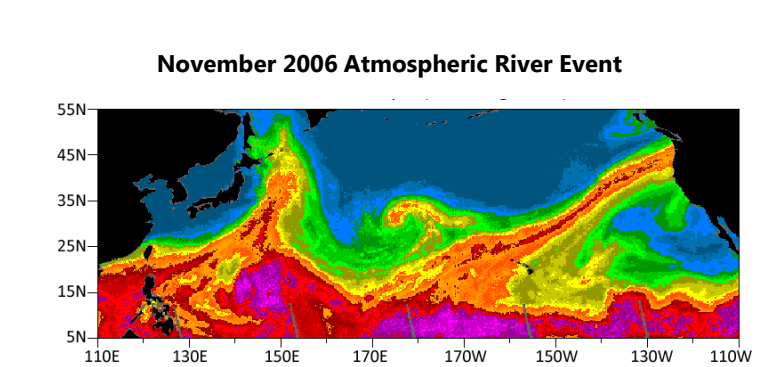
New Recommended Actions: Extreme Events

[Begins on page 68]

Recommended Action 5.5B
Plan and Prepare for Flood Events

How to implement this action:

- Develop indicators of flood emergency stages, using information about meteorologic, hydrologic, hydraulic, and watershed conditions
- Document the economic, social, and environmental impacts of floods
- Modernize precipitation and flood frequency information with state participation in these studies
- Establish early flood warning systems in areas where recent drought and wildfire have affected forests and vegetation



New Recommended Actions: Extreme Events

[Begins on page 70]

Recommended Action 5.5C
Plan and Prepare for Cascadia Subduction Earthquake Event

How to implement this action:

- Follow the recommendations provided by the Oregon Seismic Safety Policy Advisory Commission in its *2013 Oregon Resilience Plan*
- Evaluate and retrofit dams and other water infrastructure to meet new seismic standards
- See recommended actions in the infrastructure sections of the IWRS (7A – 7C)

New Recommended Actions: Water-Related Infrastructure

[Begins on page 82]

Recommended Action 7.C
Ensure Public Safety / Dam Safety

How to implement this action:

- Modernize state laws to improve the safety and resiliency of Oregon dams
- Authorize resources to determine if dams have safety deficiencies; evaluate and retrofit dams to meet new seismic standards
- Authorize emergency actions and encourage cooperative actions to improve the safety of dams
- Coordinate interagency emergency responses regarding dam inspection, communication, and evacuation
- Define the legal responsibilities of a dam owner
- Authorize a requirement for remote monitoring on deficient high hazard dams
- Require dam owners to maintain an Emergency Action Plan for all existing dams rated high hazard
- Authorize a fee for review of plans and specifications
- Dedicate grant and loan resources for rehabilitation of deficient dams

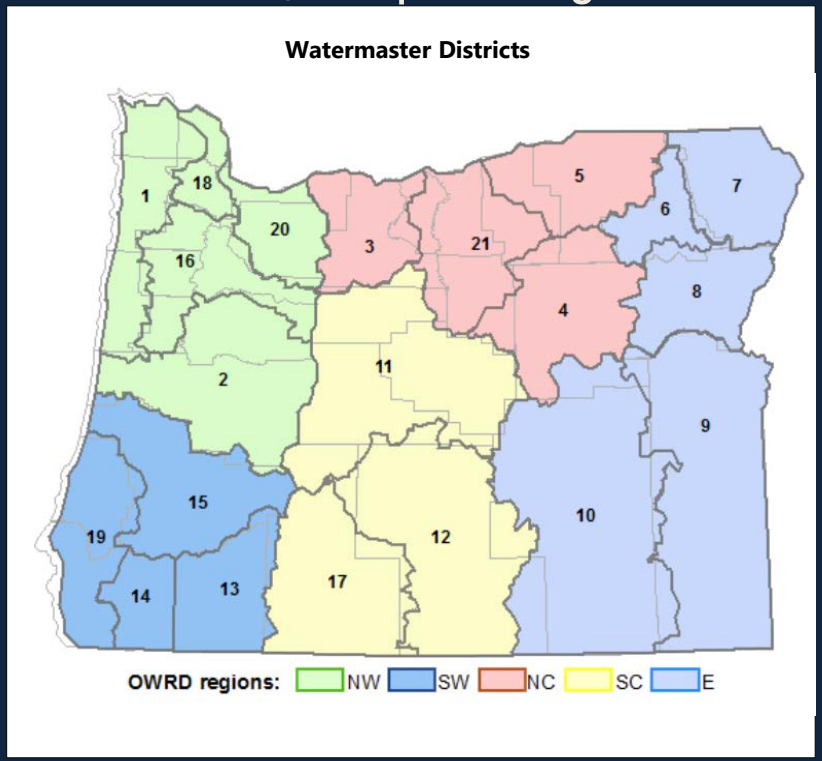
New Recommended Actions: Water Management & Development

[Begins on page 113]

Recommended Action 10.F
Provide an Adequate Presence in the Field

How to implement this action:

- Review and assess workloads; establish priorities and seek efficiencies
- Improve regulatory tools, including updating the legal and statutory foundation, modernizing technology and enforcement tools, and providing (cross) training
- Improve the ability for field staff to conduct education and outreach within their districts
- Enhance Department of Fish and Wildlife's capacity to work directly with water users and conservation interests



New Recommended Actions: Water Management & Development

[Begins on page 115]

Recommended Action 10.G
Strengthen Oregon's Water Quantity & Water Quality Permitting Programs

How to implement this action:

- Expand staff training opportunities; provide adequate staffing
- Update technologies, processing manuals, and guidance documents
- Develop outreach materials and follow-up procedures to help water users understand the application process and permit, transfer, or extension requirements
- Develop a mitigation strategy
- Create stronger linkages among partner agencies
- Develop and implement a long-term workplan to improve the quality and timeliness of individual National Pollutant Discharge Elimination System permits

New Recommended Actions: Healthy Ecosystems

[Begins on page 126]

Recommended Action 11.E
Develop Additional Groundwater Protections

How to implement this action:

- Develop a long-term plan for sustainable groundwater management
- Develop clear objectives and metrics
- Identify and prioritize important tasks
- Sketch out the necessary timelines, staffing, and resource needs

New Recommended Actions: Funding

[Begins on page 140]

Recommended Action 13.C
Invest in Local or Regional Water-Planning Efforts

How to implement this action:

- Continue to authorize and fund public and private investments in place-based integrated water resources planning
- Provide funding to develop water management and conservation plans
- Provide funding to support hazard mitigation planning (e.g. droughts, floods) at the local level
- Support river basin-planning updates

New Recommended Actions: Funding

[Begins on page 141]

Recommended Action 13.E
Invest in Implementation of Water Resources Projects

How to implement this action:

- Authorize bonds to finance these investments
- Ensure that basic maintenance needs continue to be eligible for grant and loan funding
- Advocate for continued state and federal funding for water and wastewater infrastructure
- Develop funding and technical support for low-income and small communities to maintain and operate water and wastewater-related infrastructure
- Continue funding and support for watershed restoration and Focused Investment Partnerships
- Continue to fund Water Project Grants and Loans

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 Monday, June 19
- Stakeholders and organizations have invited staff for briefings
- Public comment accepted at the May, August and November 2017 Commission meetings

Updating Boards and Commissions

Date	Board/Commission
April 24	Watershed Enhancement Board
May 12	Board of Agriculture
May 19	Land Conservation and Development Commission
June 9	Fish and Wildlife Commission
June 21-22	Environmental Quality Commission

Next Steps

- Compile and review public input
- Agency Advisory Group will do a second review
- Public comments will be brought before the Commission during the August meeting
- Commission will be asked to adopt the 2017 Strategy in November

Comments or Questions?