

**Overview of State-Level Plans and Strategies in Oregon:
How Is Water Addressed (or Not)?
How Does the Integrated Water Resources Strategy Fit In?**

Materials Prepared for July 13, 2010
Integrated Water Resources Strategy
Policy Advisory Group Meeting



Table of Contents

Executive Summary.....	3
Business Planning.....	5
Comprehensive Economic Development Strategy / Economic Development Districts	8
Comprehensive Land-Use Plans.....	11
Basin Planning.....	14
Water Management and Conservation Plans: Municipal and Agricultural.....	18
Oregon’s Water Quality Strategy.....	20
Oregon Department of Fish and Wildlife Plans and Strategies	23
Oregon Conservation Strategy.....	23
Conservation and Recovery Plans.....	23
25-Year Angling Enhancement Plan.....	24
Fish Management Plans.....	25
The Oregon Plan for Salmon and Watersheds	26
Climate Change Adaptation Framework.....	29
Oregon Board of Forestry Strategic Planning	30
Park’s Water Trails Plan and State Scenic Waterways	33
Willamette River Legacy	35
Hydropower and Regional Energy Needs	37
Department of Geology and Mineral Industries Strategy for Geologic Mapping	38

Executive Summary

The Integrated Water Resources Strategy Agency Advisory Group, in an effort to document the plans and strategies that drive economic development and natural resource management in the state of Oregon, have compiled the following document for the Policy Advisory Group.

The agencies have been asked to respond to the following questions:

- What's the basic intent of the plan/strategy?
- How do we as agencies implement it (how does it work, exactly)?
- What does the plan/strategy say (or not say) about water? Where are the "water gaps"?
- What can we be doing as part of an Integrated Water Resources Strategy, to partner with, to build upon, and to shore up these already-existing plans?

The state-wide plans summarized here represent long-standing and robust partnerships among and between Oregon's state agencies. As we work and plan to achieve our missions, agencies call upon each other's expertise and guidance, as well as input from local, federal, tribal, and private partners. The following text highlights quite a bit of this coordination and interaction.

These papers describe a number of recurring themes with regard to the state's water resources:

- These plans outline a mixture of voluntary and mandatory approaches to water management.
- State, local, federal, tribal, and private partners all have roles in the implementation of these plans.
- These plans move forward with proactive recommendations and efforts, even while agencies continue to develop better data and information.

The agencies have offered a number of observations. In terms of "Process," these observations include:

- Agencies and other partners must continue to participate in each other's efforts to inform and equip those responsible for implementation.
- Successful implementation of these plans relies on continued monitoring, communication and enforcement from other agencies.
- These plans need to lay out in greater detail how local, state, federal, tribal, private and other partners can help meet planning goals in each of these areas.

In terms of "Content," observations include:

- Groundwater availability in general and exempt-use wells in particular are largely unaccounted for in "Comprehensive Land-Use Planning,"

- Private wells are largely unaccounted for in the state’s Water Quality and Drinking Water Program, in terms of receiving technical assistance, funding, and guidance related to contamination issues.
- Recruitment and economic development strategies for Oregon are largely silent on the topic of water and wastewater issues.
- Already existing “Basin Plans” could provide the basis for further IWRS efforts, if agencies and communities could address their water needs and project ideas through these plans.
- Fish Conservation and Recovery Plans and Water Quality Programs do not specifically lay out a timeline to apply for additional instream water rights.

Business Planning

Karen Homolac, Oregon Business Development Department – Business Oregon

This paper addresses business planning in the context of mid to large size businesses. While small businesses are also critical to Oregon’s prosperity, they generally do not have high water demands.

Intent

“Oregon Shines.” This plan originated in 1989 as an economic recovery plan, focused on three goals: 1) a superior workforce, 2) an attractive quality of life and 3) an international frame of mind. The plan recommended strategies to achieve those goals. Ninety-one benchmarks, organized along social, economic, and environmental lines, were created to ground the plan in data and keep the focus on progress. The September 2008 Oregon Shines III Business Plan called for introducing tools and methods to track process in all three areas – economic, social and environmental. Unfortunately, the Progress Board, which oversaw the management of the Plan, was defunded for the Fiscal Years 2009-2011.

The Oregon Business Plan. In 2002, the Oregon Business Council launched the Oregon Business Plan (OBP), a strategic framework for public and private officials to work together to create the environment that helps Oregon traded-sector clusters succeed.

The state’s traded-sector industries are made up of clusters of businesses that sell their goods and services in competition with firms both nationally and internationally. These clusters – groups of similar firms, their suppliers, and employees – are key sources of Oregon’s economic prosperity and are represented by the following broad categories: (1) High Technology, (2) Forest Products, (3) Metals, Machinery, and Transportation Equipment, (4) Agriculture and Food Products, and (5) Clean Technology.

The Oregon Business Plan framework is built around the goals of “Oregon Shines II” – (1) Jobs for Oregonians, (2) Safe, Caring, Engaged Communities, and (3) Healthy, Sustainable Surroundings. To achieve these goals, the Oregon Business Plan focuses on four elements central to producing economic prosperity (1) education and workforce capabilities, (2) quality of life, (3) productivity, and (4) pioneering innovation. Together these elements – along with the recognition that funding public services is vital if Oregon’s industries are to thrive – were determined to be critical in order to understand Oregon’s economic assets and liabilities. In 2007, the Council added sustainability – long-term economic, social, and environmental health - to the OBP as an asset to be leveraged by Oregon’s trade-sector industry clusters.

Oregon Business Development Commission Strategy. The Oregon Business Development Commission oversees the activities of the Oregon Business Development Department (Business Oregon). The Commission goal is to ensure a coherent, integrated approach to economic development and a continuous policy direction that can transcend changes in executive and legislative leadership. The Commission adopted its current strategy document in May 2009 with the following top priority goals:

Goal 1: Help existing businesses retain jobs while growing and attracting sustainable businesses by focusing value-added services in key industries of: Clean Technology, Wood

& Forest Products, Technology & Advanced Manufacturing, and Outdoor Gear & Active Wear.

Goal 2: Enhance Oregon’s position in the global economy by assisting Oregon businesses in accessing global markets and by recruiting international companies to Oregon.

Goal 3: Advocate on behalf of Oregon businesses to capitalize on those areas where Oregon has demonstrated a competitive advantage by making targeted strategic investments.

Goal 4: Assist communities to build infrastructure capacity to address public health safety and compliance issues as well as support their ability to attract, retain, and expand businesses.

Implementation

The development of the OBP is guided by a Steering Committee, which includes members from businesses, business associations, and public agencies with responsibility for Oregon’s economic progress. Additionally, a bipartisan Oregon Business Plan Leadership Committee – comprised of Oregon’s two U.S. Senators, the Governor, the Oregon Senate President and the Speaker of the Oregon House, hosts Leadership Summits and serves to “close the loop” between business, state and federal issues and initiatives. The next summit is being planned for late 2010. The Oregon Business Development Commission’s strategy is carried out through the work of Business Oregon, in conjunction with private sector and governmental partners.

Relationship to Water

The current OBP comprises six major action item – or initiative –categories: (1) Economic Innovation, (2) Education and Workforce, (3) Health Care, (4) Public Finance, (5) Transportation, and (6) Water. Each initiative has a leader responsible for developing, advocating for and tracking progress on the recommendations, identifying opportunities for the broader community to support the effort, and reporting to the Steering Committee on progress throughout the year. Additionally, initiative leaders are responsible for updating Oregon’s elected officials, businesses, and community leaders on progress at the annual Oregon Leadership Summit.

The OBP has become established as a forum and a partnership for business and public leaders to consider and act on issues important to Oregon’s economy. OBP’s initiatives between 2002 and 2009 included addressing the (1) Improvement of federal forest health and resource utilization, (2) Development of a marketplace for ecosystem services, (3) Identification of land available for traded sector industry development, (4) Implementation of a comprehensive state energy policy, and (5) Provision of safe and sustainable water supplies and services for all beneficial uses.

The Oregon Business Development Commission’s current strategy does not address water resource quantity and quality issues directly, although funding programs for public water and wastewater system improvements are available through the Infrastructure Finance Authority. The current strategy does reference at least one industry – clean technology – known to have a need for water of sufficient quantity and quality. Business Oregon does work with other industries that have water needs, for example, the food processing industry. Moreover,

Business Oregon's Industrial Lands Program assists communities with readying lands for industrial use with guidance on water and wastewater flow needs by broad industry category.

Recommendations

Partner with the Oregon Business Council and discuss development of an initiative to understand and meet Oregon's traded-sector industries current and future water needs.

Useful Links / Resources

The Oregon Business Plan website - <http://www.oregonbusinessplan.org/>

The Oregon Progress Board – Oregon Shines - <http://www.oregon.gov/DAS/OPB/os.shtml>

OBDD Industrial Lands Certification Program -

<http://www.oregon4biz.com/The-Oregon-Advantage/Oregon-Certified-Industrial-Lands/>

Oregon Prospector website - <http://www.oregonprospector.com/>

Comprehensive Economic Development Strategy / Economic Development Districts

Karen Homolac, Oregon Business Development Department – Business Oregon

Intent

Oregon's Economic Development Districts (EDDs) are part of a nationwide network of 520 Regional Development Organizations, including the 382 multi-county EDDs designated and funded by the U.S. Economic Development Administration (EDA). Oregon's eleven (11) Economic Development Districts and one Tribal EDC include:

- Cascades West Economic Development District – Benton, Lane, Lincoln, Linn counties.
- Columbia-Pacific Economic Development District – Clatsop, Columbia, and Tillamook counties, parts of Washington County.
- CCD Business Development Corporation – Coos, Curry and Douglas counties.
- Central Oregon Intergovernmental Council – Crook, Deschutes, and Jefferson counties.
- Greater Eastern Oregon Development Corporation – Gilliam, Grant, Morrow, Umatilla, Wheeler, Harney, and Malheur counties.
- Mid-Columbia Economic Development District – Hood River, Wasco, and Sherman counties + two Washington state counties (Skamania and Klickitat).
- South Central Oregon Economic Development District – Lake and Klamath counties.
- Mid-Willamette Valley Council of Governments – Marion, Polk, and Yamhill counties.
- Northeast Oregon Economic Development District – Baker, Union, and Wallowa counties.
- Portland Regional Partners/Portland-Vancouver Economic Development District – Multnomah and Clackamas counties, parts of Washington county.
- Southern Oregon Regional Economic Development, Inc. – Jackson and Josephine counties.
- Affiliated Tribes of Northwest Indians – Economic Development Corporation

The Public Works and Economic Development Act of 1965, as amended, requires an EDD to implement a Comprehensive Economic Development Strategy (CEDS) in order to apply for investment assistance under EDA's Public Works or Economic Adjustment Assistance Programs. All of Oregon's EDDs have implemented a CEDS.

The CEDS is developed with both public and private sector input, serves as a regional economic roadmap and is required to be updated every five (5) years (or earlier if regional circumstances change dramatically). A CEDS is designed to provide an analysis of the regional economy and to serve as a guide for establishing regional goals and objectives, developing and implementing a regional plan of action, and identifying investment priorities and funding sources. Overall, each CEDS serves as a vehicle for each EDD to undertake periodic economic development planning that involves broad-based and diverse public and private sector participation, that sets forth the goals and objectives necessary to solve the economic development problems of a region and which clearly defines the metrics of success.

Each CEDS must contain a background of the economic development situation of the region and include a discussion of the economy, population, geography, workforce development and

use, transportation access, resources, and environment. As such, a CEDS must include the following sections:

- Analysis of economic development problems and opportunities.
- Defined regional expectations, goals, and objectives, which are necessary to solve identified economic problems, or to capitalize on resources in the region.
- Community and private sector participation.
- Identify strategic projects, programs, and activities to address a region's greatest needs or to enhance a region's competitiveness.
- Plan of action.
- Integration with state economic development priorities.
- Performance measures.

Implementation

Each EDD prepares and adopts its own CEDS; EDA reviews and approves each CEDS to ensure that the CEDS satisfies the criteria as mandated in the Public Works Economic Development Act. Each EDD is governed primarily by policy boards of locally elected and appointed officials, along with representatives of business, education, and nonprofit sector leaders. Originally created to provide economic development planning services, EDDs are now involved in providing critically needed capacity to local governments within their region; many EDDs serve as the Area Commission on Transportation (ACTs), and all generally assist local governments on infrastructure and development projects, land use planning, including strategic and capital improvement planning.

Relationship to Water

The CEDS does not directly address water; however, it does require each region to perform an analysis of its strengths and weaknesses, which generally include infrastructure (water and wastewater) and resources (land use i.e., industrial lands availability). For example, the Cascades West EDD recognized that economic growth of its region was directly related to its inventory of available industrial lands; however, most of the region's vacant industrially zoned lands exhibit wetland characteristics. Cascades West partnered with local and state governments to explore the ways that wetlands affect industrial location decisions. Currently, CWEDD is working on a Regional Industrial Lands/Wetlands Mitigation Project which includes developing one of Oregon's first regional analyses of industrial land use requirements. The outcome is expected to help local governments look at local and regional solutions, such as identifying non-wetland areas for future industrial development, establishing a regional wetlands mitigation bank or other mechanisms that address wetland areas on industrial lands.

It seems reasonable to expect that the same fundamental gaps in water planning exist in the CEDS as they do for land-use planning for local comprehensive plans, since both rely on many of the same information sources for water quality and quantity in a region.

Recommendations

The CEDS requires that, in order for it to function as a long-range planning tool for a region, it detail the methodology through which it cooperates and is integrated with the State's economic development priorities.

Helpful Links / Resources

US Economic Development Administration - <http://www.eda.gov/InvestmentsGrants/Investments.xml>

CEDS Requirements - <http://www.eda.gov/PDF/CEDSFlyer081706.pdf>

Oregon's Economic Development Districts - <http://www.oedd.org/>

Cascades West EDD - <http://www.ocwcog.org/>

Columbia-Pacific EDD - <http://www.nworegon.org/>

CCD Business Development Corporation <http://www.ccdbusiness.com/>

Greater Eastern Oregon Development Corporation - <http://www.geodc.net/>

Central Oregon Intergovernmental Council - <http://www.coic.org/>

Mid-Columbia Economic Development District - <http://www.mcedd.org/>

Mid-Willamette Valley Council of Governments - <http://www.mwvcog.org/>

South Central Oregon EDD - <http://www.scoedd.org/>

Northeast Oregon EDD - <http://www.neoedd.org/>

South Oregon Regional Economic Development, Inc. - <http://www.soredi.org/>

Portland Regional Partners/Portland-Vancouver EDD - <http://www.portlandregionalpartners.com/>

Affiliated Tribes of Northwest Indians – Economic Development Corporation - <http://www.atniedc.com/>



Comprehensive Land-Use Plans

Rob Hallyburton, Department of Land Conservation and Development

Intent

A comprehensive plan is a generalized, coordinated land use map and policy statement of the governing body of a local government that interrelates all functional and natural systems and activities relating to the use of lands, including but not limited to: sewer and water systems, transportation systems, educational facilities, recreational facilities, and natural resources and air and water quality management programs. "Land" includes water, both surface and subsurface, and the air. (ORS 197.015(5))

The Land Conservation and Development Commission "acknowledges" a local government's comprehensive plan when it is found to be in compliance with the 19 statewide planning goals.

The statewide planning goals are:

- | | |
|--|------------------------------------|
| 1. Citizen Involvement | 10. Housing |
| 2. Land Use Planning | 11. Public Facilities and Services |
| 3. Agricultural Lands | 12. Transportation |
| 4. Forest Lands | 13. Energy Conservation |
| 5. Natural Resources, Scenic and Historic Areas, and Open Spaces | 14. Urbanization |
| 6. Air, Water and Land Resources Quality | 15. Willamette River Greenway |
| 7. Areas Subject to Natural Hazards | 16. Estuarine Resources |
| 8. Recreational Needs | 17. Coastal Shorelands |
| 9. Economic Development | 18. Beaches and Dunes |
| | 19. Ocean Resources |

Goals that directly affect water include Goal 5 - Natural Resources, Scenic and Historic Areas, and Open Spaces, Goal 6 - Air, Water and Land Resources Quality, and Goal 11 - Public Facilities and Services, and are more specifically described below. Other goals don't directly address water but have an effect on, or are affected by, water quantity or quality.

Goal 5 and its administrative rules require local governments to protect, among other things, "significant natural resources." These include (1) critical groundwater areas and restrictively classified areas designated by the Oregon Water Resources Commission and (2) certain wellhead protection areas. Few local governments have completed the planning under Goal 5 for the former. Completing the Goal 5 process for wellhead protection areas is not mandatory. The Goal 5 provisions for protecting significant riparian corridors are partly there to protect surface water, particularly in urban areas. Goal 5 also has a requirement to protect wetlands.

Goal 6 is aimed at maintaining and improving the quality of the air, water, and land resources of the state. This goal has no implementing rules. Although the goal directs local governments to consider the effects of land use on water quality, it does not contain specific requirements on how to achieve this aim.

Goal 11 and its administrative rules require cities with a population greater than 2,500 to prepare public facilities plans addressing drinking water, wastewater disposal and treatment, and stormwater management needs. These plans focus on the costs and timing of infrastructure needs and coordination among providers within the jurisdiction.

Implementation

Local governments (cities and counties) prepare and adopt comprehensive plans consistent with the 19 statewide planning goals. Comprehensive plans are implemented by local codes, especially those containing zoning and land development regulations.

There are two phases of land-use planning, generally referred to as “long-range” (advance) planning and “current” (permit processing) planning. Long-range planning involves decisions on broad policy goals, such as: where do we want industry to locate? What wildlife habitat are we going to protect? Is there enough water to sustain current and future growth in this area? This is when local governments plan and zone designations for large areas. Local governments conduct current planning by implementing those policies on a parcel-by-parcel basis. For example, processing an application to subdivide a piece of land requires implementation of prior policy decisions on matters such as minimum lot size, public street dedications, and demonstration of an adequate water supply.

“Long-Range” Land-Use Planning and Groundwater Issues

In the realm of long-range planning, water supply comes up most often in the context of rural residential zoning and carrying capacity (usually aquifer capacity). Although individual residences do not generally stress a water supply significantly, the cumulative effects of larger developments do cause concern.

Prior to issuance of any water right permit by the Water Resources Department, the applicant must first obtain land use approval from the local government. However, the Water Resources Department does not require water use permits for domestic (residential) exempt-use wells. Thus, local government, through its zoning and permitting authorities, plays a greater role when making development decisions that affect rural residential water use.

When long-range decisions regarding zoning and the intensity of uses are made with inadequate information regarding carrying capacity, aquifer capacity issues can come up when considering, for example, a rural residential subdivision.

“Current” Land-Use Planning and Groundwater Issues

Consideration of water supply in current planning, when no water right permit is required, is generally limited to: “will well yields be enough to adequately serve that development?” This is generally just looking at the subject property and development (i.e., it is not good public policy to permit development that will be abandoned due to lack of water supply), but sometimes well-to-well interference is a concern.

State laws regarding short-term supply are weak. Some local governments have developed ways to address this issue. These requirements typically involve a review of well logs or performance of pump tests to determine well-flow on the subject property or the vicinity. At least two counties require that nearby wells be monitored during a pump test to gauge off-site drawdown in some situations.

Water Quality

State and local governments in Oregon have used the framework of “long-range” and “current” planning to address what has seemed like “appropriate consideration” of development impact on water resources, particularly drinking water. Water quality considerations have been less prominent, although Oregon’s land-use laws do recognize the importance of water quality, allowing local governments to protect water quality from development impacts.

In rare cases, state requirements relating to onsite sewage disposal have failed to protect groundwater quality over the long term. In certain conditions, onsite septic systems met design regulations at the time of installation, but have contributed to the deterioration of the groundwater quality in that area over time. It has been demonstrated in these situations that an area-wide approach for managing sewage may be more protective of groundwater.

In current planning, point and nonpoint source pollution from development is subject to permits from the Department of Environmental Quality. Therefore, any local land-use decision generally just requires an applicant to obtain the necessary state permits.

Recommendations

The most pressing need is data and information regarding the location and available quantity of the resource. For example, the Strategy could help to equip planners with the tools they need to consider the water quality and instream effects of development. The Strategy could also provide counties with timely and accurate groundwater information that would help with their land-use planning needs.

Useful Links / Resources

It is difficult to find all of the city and county comprehensive plans, but here is a good place to start: <http://www.statelocalgov.net/state-or.cfm> (DLCD keeps hard copies of all acknowledged plans.)

Statewide planning goals: <http://www.oregon.gov/LCD/goals.shtml>

A Citizen’s Guide to the Oregon Coastal Management Program (includes a good primer on the statewide planning program): <http://www.oregon.gov/LCD/docs/publications/citzngid.pdf>



Basin Planning

Ruben E. Ochoa, Oregon Water Resources Department

Many western states have made water planning at the regional level an essential component to further develop and periodically update their state water plans. In Oregon, water resource planning has been implemented on a river basin-by-river basin basis. Since the late 1950's, the Oregon Water Resources Commission (Commission) and its predecessor entities have been developing and updating river basin water plans and implementing these plans via administrative rule. These river basin water plans, collectively referred to in statute and rule as "basin programs," reside in OAR Chapter 690, Divisions 501 – 520.

Intent

The statutory foundation for the development of "basin programs" was established by HB 25 in 1955. In HB 25 (Chapter 707, Oregon Laws 1955), the Legislature created a new state agency, the State Water Resources Board (Board), vested with broad authority to establish state water policy and to carry out a statewide coordinated and integrated plan for water resource management. HB 25 provided various declarations of policy to guide the Board's efforts, including:

- Protection and preservation of existing rights, established duties, and relative priorities;
- Preference for watershed development policies that preserve balanced multiple uses;
- Maintenance of minimum perennial streamflows sufficient to support aquatic life and to minimize pollution; and
- Promotion and encouragement of local development for watershed conservation.

HB 25 authorized the Board to classify and re-classify any waters of the state for future allowable beneficial uses, to prescribe preferences for particular future uses over other uses and to withdraw streams from further appropriation when "necessary in the public interest to conserve the water resources of (the) state." In addition, certain actions by any "state agency or public corporation which would tend to derogate from or interfere with the state water resources policy" as adopted by the Board were declared unlawful under HB 25. Importantly, the Legislature directed the Board to promptly study the water resources of the state. Based upon these studies and state agency input, the Board would "progressively formulate an integrated, coordinated program for the use and control of all water resources of this state and issue statements thereof." Many of the policies, directives, and authorizations provided for in HB 25 can be found essentially intact as originally codified in 1955 in ORS 536.220, 536.300 and 536.310.

Implementation

In carrying out its duties, the Board decided to take a basin-by-basin approach, a choice driven in large part by the wide diversity of water resources, water uses, current water supply demands, and future water supply needs among the state's major river basins. The Board explicitly recognized in its First Biennial Report to the Oregon Legislature that "no plan or program...can succeed without the full support of those directly involved" and represented that it would base programs "to a considerable extent on local desires." The record indicates that the administrative basins chosen by the Board represented an attempt to align the physical contours of the major river or drainage basins of the state with the boundaries of watermaster districts as they existed at that time. (See the attached map of the Commission's administrative basins). The state adopted its first basin program in 1959

(Umpqua River Basin). By 1970, basin programs had been adopted for 15 of the state's 18 administrative basins and for the Middle Snake River. Basin programs have now been adopted for all of the Commission's administrative basins, except for the Klamath River Basin. Basin programs also exist for the mainstem of the Columbia and Middle Snake Rivers that border Oregon.

Figure 1: Oregon's Administrative Basins. Basin Programs have also been adopted for the Middle Snake River (RM 176 to RM 247), and the Columbia River (RM 309 to the confluence).



The general approach taken by the Board to formulate basin programs included the following three steps:

Conduct Studies. The specific subject matter of the studies to be conducted were identified in HB 25 include: existing water resources and the means and methods of conserving and augmenting these water resources; existing and contemplated needs and uses of water for domestic, municipal, irrigation, power development, industrial, mining, recreation, wildlife and fish life uses and for pollution abatement (all declared to be beneficial uses), and all other related subjects, including drainage and reclamation. The Board established a planning program to conduct the studies and to staff the basin planning process.

Develop a Basin Report (Plan). After concluding the necessary studies, the Board published a basin report which included analysis of the basin studies, consideration of data, research and other input from various federal, state, and local agencies and a summary of testimony received from the public at hearings held within the basin. The reports described the basin's physical features and the various factors (such as population, transportation, land use and ownership, agriculture, forestry, mining, commercial fishing, manufacturing and recreation) that contributed to the basin's economy. The reports contained findings and conclusions regarding the quantity and quality of surface water and groundwater supplies; water use and control, including drainage and erosion; and an examination of the potential for water resource development in the basin.

Adopt Basin Programs. The general approach taken by the Board in the basin programs was to apportion or classify each basin's water for certain "designated uses" based upon present water supply uses and constraints and future water supply needs. These designated uses included domestic, livestock, municipal, irrigation, power development, industrial, mining, recreation, wildlife, pollution abatement and fish life uses. The basin programs were adopted via rulemaking, and as such, were developed subject to review and comment by the public prior to adoption.

During the 1970's, the Water Resources Board, and its successor, the Water Policy Review Board, began comprehensive revisions of the basin programs. This "comprehensive" effort fell victim to sustained reductions in federal and state funding support. By the early 1980's, work was proceeding on only one basin program. Significant reductions in federal and state funding persisted and the pool of funds to conduct full-fledged basin program updates completely dried up by the early 1990's.

Nonetheless, the basin programs, and the broader state water management program of which they are a part, continued to be among the priority issues periodically reviewed by Oregon's Legislature and the Water Resources Commission (Commission). Three review efforts of note include those conducted by: 1) the Strategic Water Planning Group, created in 1983 via the passage of SB 52; 2) the Water Resources Commission in 1993-94 with the intent of improving its existing basin planning program; and 3) the Joint Task Force on Water Supply and Conservation, established in 1999 via the passage of SB 93.

Relationship to Water

A common conclusion reached as a result of these reviews was that basin programs, conceptually and administratively, needed to expand beyond their primary focus of apportioning or "classifying" water to a broader range of water management issues. Sometimes described as "inflexible," the basin programs make no allowance for unexpected new uses of water that may be supported by policy makers and the public. The lack of a process that produces basin plans and programs that can turn into actions was identified as another important issue that warranted further review.

Recommendations

Basin programs continue to represent an important component of the state's ongoing attempt to develop a coordinated, integrated water resources program for managing Oregon's water resources. They were developed at the major river basin scale and formulated in consideration of the unique water resources and socio-economic conditions of each basin.

The basin program concept is firmly supported by existing statutes and administrative rules. They could be revised to address identified shortcomings, restructured to provide a process for better coordination between federal, state, and local agencies at the regional level, and reoriented to recommend state investment in specific projects to meet future instream and out-of stream water supply needs.

Helpful Links / Resources

Chapter 690, see Divisions 501 – 520 for the basin programs -

<http://www.wrd.state.or.us/OWRD/LAW/oar.shtml>

Chapter 690, Division 500: Basin Program Preamble and Definitions -

http://arcweb.sos.state.or.us/rules/OARS_600/OAR_690/690_500.html



Water Management and Conservation Plans: Municipal and Agricultural

Bill Fujii and Lisa Jaramillo, Oregon Water Resources Department

Intent

Municipal water management and conservation planning provides a process through which cities and other municipal water suppliers estimate long-range water supply needs and identify alternatives, including water conservation programs, to meet those needs. The Department requires many municipal water suppliers to prepare plans as conditions of their water use permits or permit extensions.

The Water Resources Department coordinates a voluntary program for agricultural water management and conservation planning, helping water suppliers examine their supply, demand, future needs, and water conservation tools. By using this process, irrigation districts—and other agricultural water suppliers—can create a “water budget” for their current and future needs.

Implementation

Plans are implemented by the water providers and suppliers who develop the plans. However, the Water Resources Department evaluates *Municipal Plans* for compliance with requirements under the permit extension process. These plans are also submitted to seek authorization for increased diversion under extended permits. The Water Resources Department also works to ensure that these plans comply with local comprehensive plans, consistent with the Department’s agreement with the Department of Land Conservation and Development.

An entity may be required to develop a water management and conservation plan by other entities, such as the Department of Human Services Drinking Water Program, the Oregon Business Development Department or wholesale water providers. To aid municipal suppliers in preparing plans and complying with the rules, the Water Resources Department has developed a guidebook and provided workshops.

Agricultural Plans. While the agricultural conservation program is largely voluntary, some actions do require plans under Oregon law. For example, if an irrigation district wants to transfer water rights from one district user to another to prevent forfeiture of water rights, a conservation plan must be in place. In the event of a drought, the Governor may require a conservation plan or a drought curtailment policy. Water Resources Department staff members have also conducted workshops to aid irrigation districts with preparation of agricultural water management and conservation plans.

Generally, a water management and conservation plan may be approved for up to 10 years, at which time a plan update is required. For municipal plans with 10-year approval dates, a five-year progress report is required. Progress reports include a list of the conservation benchmarks established in the water management and conservation plan and a description of progress implementing the associated conservation measure or other measures.

Relationship to Water

The goals of the water management and conservation program include stabilizing water supplies to serve existing water rights, restoring streamflows, and providing for future economic growth. Planners also consider short term and catastrophic water shortages. Other concerns include

providing adequate streamflows to protect aquatic life, to provide recreational opportunities, and to maintain water quality.

Recommendations

A funding guidance document for developing community water system projects was put together by the Oregon Economic and Community Development Department (now the Oregon Business Development Department), U.S. Department of Agriculture – Rural Utilities Service, and the Rural Community Assistance Corporation with assistance from the Oregon Department of Land Conservation and Development, the Oregon Health Division, and the Oregon Water Resources Department in 2001. This guidance document could be updated or built upon as part of the Strategy.

Helpful Links / Resources -

Chapter 690, Division 86: Water Management and Conservation Plans -

http://arcweb.sos.state.or.us/rules/OARS_600/OAR_690/690_086.html

Water Management and Conservation Plans: A Guidebook for Oregon Municipal Water Suppliers -

<http://www.orcities.org/Portals/17/Premium/wmcpguidebook.pdf>

Guidelines for preparing Community Water System Projects (2001) -

http://www1.wrd.state.or.us/pdfs/Guidelines_2001.pdf

Agricultural Water Management and Planning Guidebook -

http://www1.wrd.state.or.us/pdfs/Ag_WMCP_Guide.pdf

Oregon's Water Quality Strategy

Christine Svetkovich, Dept. of Environmental Quality

Karen Kelley, Department of Human Services, Drinking Water Program



Intent

The Water Quality Program's mission is to protect and improve Oregon's water quality. Protecting the quality of Oregon's rivers, lakes, streams, and groundwater keeps these waters safe for a multitude of beneficial uses such as drinking water, fish habitat, recreation, and irrigation. The availability of clean and healthy water is critical to Oregon's environment and economy.

The mission of Oregon's Drinking Water Program is to assure Oregonians have safe drinking water by reducing the risk of waterborne disease and exposure to chemical contaminants in drinking water.

Implementation and Relationship to Water

The federal Environmental Protection Agency delegated authority to the Department of Environmental Quality (DEQ) to implement the federal Clean Water Act and parts of the federal Safe Drinking Water Act in Oregon. Parts of the Safe Drinking Water Act are also implemented by the Department of Human Services (DHS). Not all of DEQ's water quality programs are delegated under the Clean Water Act, and there are many state laws that govern the protection of water quality implemented by other natural resource agencies.

Clean Water Act. Establishing clean water standards for Oregon is at the core of DEQ's water quality activities. Standards establish water quality goals by designating beneficial uses for each waterbody and setting criteria to protect those uses. Beneficial uses include public water supply, fish and aquatic life, drinking water, recreation, irrigation, and more. Standards are adopted by the Environmental Quality Commission and must be approved by the federal Environmental Protection Agency (EPA). The Water Quality Program then acts to protect and restore water to the standards that allow those uses.

DEQ's wastewater permitting program regulates and minimizes adverse impacts of pollution on Oregon's waters from point sources of pollution based on water quality standards. The term "point source" generally refers to wastewater discharged into water or onto land through a pipe or a discernible channel. These point sources operate under the terms of a federal National Pollutant Discharge Elimination System (NPDES) or state Water Pollution Control Facilities (WPCF) wastewater discharge permit issued by DEQ. This program includes municipal, industrial, and stormwater discharges.

Section 319 of the federal Clean Water Act requires states to have nonpoint source programs based on assessments of the amounts and sources of nonpoint source pollution in the state. Nonpoint source pollution comes from numerous diffuse sources such as runoff from roads, farms, forestlands, and construction sites and affects the quality of both surface water and groundwater. This type of pollution is thought to be the largest source of water quality pollution across the country. DEQ provides grant money to local organizations for nonpoint source projects, such as public education and watershed restoration activities. DEQ also works with others (state and federal agencies, municipalities, watershed councils, Soil and Water Conservation Districts, etc.) to prevent and

eliminate water pollution from nonpoint sources by emphasizing watershed protection and enhancement, voluntary stewardship, and partnerships between all watershed stakeholders.

Every two years, DEQ assesses water quality and reports to EPA on the condition of Oregon's waters. DEQ prepares an integrated report that meets the requirements of the federal Clean Water Act (CWA). CWA Section 305(b) requires a report on the overall condition of Oregon's waters. CWA Section 303(d) requires identifying waters that do not meet water quality standards where a clean water plan, or Total Maximum Daily Load (TMDL), needs to be developed. The integrated report includes an assessment of each waterbody where data are available, and the list of waters identified under Section 303(d) as water quality limited needing a TMDL.

Once a waterbody is placed on the 303(d) list, the CWA requires states to develop a plan to meet clean water standards. This plan is called a TMDL, which describes the maximum amount of pollutants allowed from municipal, industrial, commercial, and surface runoff sources including natural background that can enter waterways without violating clean water standards.

Implementing a TMDL often includes revising industrial and municipal wastewater permits to incorporate revised permit limits. On agricultural and rural residential lands, area plans are developed through the Oregon Department of Agriculture's (ODA) Agriculture Water Quality Management Act. On state and private forestlands, the Department of Forestry has the lead in providing water quality protection through the Forest Practices Act and long range management plans. In urban areas, local governments take the lead in developing TMDL implementation plans. The U.S. Forest Service and the Bureau of Land Management are responsible for developing water quality restoration plans for lands under their jurisdiction.

Under most circumstances, TMDL implementation plans for improved water quality rely on cooperation among landowners and land managers within a river basin. Local watershed councils, Soil and Water Conservation Districts, or other organizations serve as community-based coordination points for these united efforts. TMDL implementation plans describe actions that will be taken to reduce pollution.

Finally, DEQ monitors Oregon's waterways to determine the quality, presence and levels of pollution. DEQ monitors water quality with regular conventional pollutant sampling for more than 50 rivers and streams in Oregon. In addition, DEQ has a toxics monitoring program that regularly conducts special monitoring projects funded by grants from the Environmental Protection Agency and others. The data generated is used to set program priorities, develop TMDLs, the integrated report, permits as well as report on the conditions of Oregon's waters and work with others to reduce water pollution.

Groundwater. The goals of the Oregon Groundwater Quality Protection Act are to prevent contamination of groundwater resources, conserve and restore groundwater, and maintain the high quality of Oregon's groundwater resource for present and future uses. DEQ has primary responsibility for implementing groundwater protection in Oregon. DEQ uses a combination of programs to help prevent groundwater contamination from point and nonpoint sources of pollution by cleaning up pollution sources and monitoring and assessing groundwater and drinking water quality. DEQ implements some programs through partnerships with Oregon Department of Human Services, Oregon Water Resources Department, Oregon Department of Agriculture, Oregon State University, and other state, local, and private organizations, businesses, and individuals.

DEQ administers the Underground Injection Control (UIC) Program under the Safe Drinking Water Act. Injection systems are any human-made design, structure, or activity which discharges below the ground or subsurface. Common uses include: stormwater discharge, industrial/commercial, process waste water disposal, sewage drill holes, aquifer remediation systems, agricultural drainage, geothermal systems, and aquifer storage and recovery. The intent of the program is to protect groundwater resources, primarily used for drinking water, from contamination. The UIC program issues permits and authorizations to ensure groundwater quality is protected.

Drinking Water. Groundwater aquifers in Oregon are regarded as potential drinking water sources. With proper treatment, most surface waterbodies are suitable for drinking water as well. The Drinking Water Program is located in DEQ and DHS (including the Public Health Laboratory for certifying private drinking water laboratories). Through contracts and inter-agency agreements, the Oregon Business Development Department operates the drinking water revolving loan fund, the county health departments and ODA directly oversee smaller public water systems, and several contractors provide technical assistance and operator training to water suppliers, all of which are partners with the Drinking Water Program.

While the Drinking Water Program and its partners oversee and ensure safe drinking water statewide, public water suppliers are the actual providers of drinking water for Oregonians. DHS carries out its mission by implementing and enforcing federal drinking water quality standards through the Safe Drinking Water Act at public water systems statewide, and providing regulatory, technical, and financial assistance to water suppliers. There are federal Environmental Protection Agency standards currently established for 91 different drinking water contaminants.

DEQ, DHS, and others work together to implement the Clean Water Act and the Safe Drinking Water Act to help protect public health by protecting sources of water used for drinking water. DHS reviews groundwater source construction, aquifer characteristics, and land use to identify potential vulnerabilities to contamination. DEQ has the lead in developing protection strategies to reduce the risk of contamination to public water system intakes, wells, and springs. Both DEQ and DHS further assist communities in implementing strategies to reduce these risks. DEQ uses data to work with other agencies, programs, and partners to leverage and combine existing resources to help protect public water systems from pollution. This work is done through a number of DEQ's programs including Drinking Water, Groundwater, nonpoint source pollution, monitoring, TMDL, wastewater permitting, and others.

Recommendations

The Integrated Water Resources Strategy must ensure all water protection laws are implemented. Agencies should continue to coordinate their development of common goals, data collection and sharing efforts, and provide clear and consistent public communication as part of these plans.

Useful Links / Resources

<http://www.oregon.gov/DEQ/WQ/index.shtml>

<http://www.oregon.gov/DHS/ph/dwp/>



Oregon Department of Fish and Wildlife Plans and Strategies

Bruce McIntosh and Rick Kepler, Oregon Department of Fish and Wildlife

Oregon Conservation Strategy

Intent

The Oregon Conservation Strategy is an effort to use the best available science to create a broad vision and conceptual framework for long-term conservation of Oregon's native fish and wildlife, as well as various invertebrates and native plants. It recognizes that healthy fish and wildlife populations require adequate habitat, which is provided in natural systems and, for many species, in landscapes managed for forestry, agriculture, range and urban uses. The goals of the Conservation Strategy are to maintain healthy fish and wildlife populations by maintaining and restoring functioning habitats, preventing declines of at-risk species, and reversing declines in these resources where possible. This document is called a strategy, not a plan, because its purpose is to help people make decisions more strategically about how they can invest time and resources in fish and wildlife conservation.

Implementation

The Conservation Strategy focuses on voluntary efforts to promote integration and innovation within Oregon's existing conservation framework. The Conservation Strategy is intended to provide a long-term, big-picture "blue print" for conserving Oregon's natural resources to maintain or improve environmental health for today and for future generations. It outlines how and where the state and its conservation partners, including landowners and land managers, can best focus this work.

Relationship to Water

The Conservation Strategy identifies six key issues that need to be addressed and are integral for the long-term conservation of Oregon's native fish and wildlife. Water quality and quantity are combined as the 5th of these key issues. The 6 key issues are:

- Issue 1: Land Use changes
- Issue 2: Invasive Species
- Issue 3: Disruption of Disturbance Regimes
- Issue 4: Barriers to Fish and Wildlife Movement
- Issue 5: Water Quality and Quantity
- Issue 6: Institutional Barriers to Voluntary Conservation

Recommendations

Have the IWRS consider impacts on and effects to fish and wildlife in making determinations about how water is allocated and used. Better integrate the ability to provide and consider voluntary conservation actions.

Helpful Links / Resources: – <http://www.dfw.state.or.us/conservationstrategy/>

Conservation and Recovery Plans

Intent

The plans are designed to address legal requirements for recovery planning under the U.S. Endangered Species Act (ESA) and under [Oregon's Native Fish Conservation Policy](#) (OAR 635-007-

0502). The plans developed under this policy provide an informed, strategic approach to recovery that is based on science, is supported by stakeholders, and is built on existing efforts and new proposed recovery actions. The plans are linked to an adaptive management framework that will allow it to evolve over time with the acquisition of new information, including assessment of the success of recovery actions implemented.

Implementation

There are currently 125 species and sub-species that need a conservation plan. Of these species, 43 either have a conservation plan already developed, are in draft form, or in progress. A complete list of species and associated plans can be found through the link below.

Relationship to Water

For some species, water availability has been identified as the key limiting factor for facilitating certain life stages, such as migration and spawning. In other cases, water levels and volumes provide certain habitats that have been identified as a limiting factor, such as access to shallow and back water habitats or access to food sources for rearing.

Recommendations

Recognize that fish species are sometimes limited by available water, which provides for needed habitats and triggering of different life stage events. In listed species, certain flows and habitat conditions are needed for a species to recover.

Helpful Links / Resources

http://www.dfw.state.or.us/fish/CRP/conservation_recovery_plans.asp

25-Year Angling Enhancement Plan

Intent

To enhance, develop, and promote diverse and productive recreational fishing opportunities that are consistent with the conservation needs of native species; provide balanced economic and social benefits; and connect Oregonians with fish, water, and the outdoors.

Implementation

The plan has two goals: (1) to provide diverse, stable, and productive angling opportunities; (2) to increase angling participation. The plan has a number of strategies that ODFW is focused on achieving, several of which relate to water.

Relationship to Water

Several of the strategies relate to improving fisheries as a way to promote fishing opportunities. This requires that fish populations be maintained at healthy sustainable levels to allow harvest to take place. The main strategies dealing with the water aspect are:

- a) Enhance natural production of fish stocks to levels that allow for recreational fishing opportunities.
- b) Use the best science available to assess fish populations, provide for maximum sustainable catch, and respond to angler preferences.
- c) Actively manage fisheries to provide recreational angling opportunities.

d) Educate the public regarding fish, fisheries, and the natural environment.

Recommendations

Recognize that providing sustainable fisheries for the public is an important goal for the state and provides both an economic and social benefit to Oregonians.

Useful Links / Resources

www.dfw.state.or.us/resources/fishing/docs/25_Year_Recreational_Angling_Enhancement%20Plan.pdf

Fish Management Plans

Intent

Fish Management Plans are adopted by the Oregon Fish and Wildlife Commission as rules and are comprehensive documents that the Department of Fish and Wildlife regards as a means to implement policy and as an explanation of the intent and rationale of management direction. Plans contain factual background material, statements of the rationale for selection of objectives, strategies to be applied to attain objectives, and statements of general priorities for various actions.

Implementation

Fish Management Plans guide ODFW in its actions related to the management of the state's fisheries and how it implements its duties.

Relationship to Water

The plans may contain directives about how to maintain certain species and the actions needed to maintain sustainable populations and their habitat, many aspects require sufficient quantities of high quality water at the appropriate times and places.

Recommendations

Recognize that water quality and quantity affect the sustainability and survival of all of Oregon's native fish species and those certain critical needs must be provided to maintain sustainable fish populations and their habitat.

Helpful Links / Resources

<http://www.dfw.state.or.us/OARs/500.pdf>



The Oregon Plan for Salmon and Watersheds

Suzanne Knapp, Governor's Natural Resources Office

Melissa Leoni, Oregon Watershed Enhancement Board

Intent

The mission of the [Oregon Plan](#) for Salmon and Watersheds is to restore the watersheds of Oregon and to recover the fish and wildlife populations of those watersheds to productive and sustainable levels in a manner that provides substantial ecological, cultural, and economic benefits (ORS 541.405(1)(a)). The Oregon Plan consists of four key elements:

- Voluntary restoration actions by private landowners with support from citizen groups, businesses and local government;
- Coordinated state and federal agency and tribal actions to support private and voluntary restoration efforts, effectively implement agency programs, soundly manage public lands, and promote public education and awareness about watersheds and salmon;
- Monitoring watershed health, water quality, and salmon recovery to document existing conditions, track changes, and determine the impact of programs and actions;
- A scientific foundation as guided by the Independent Multidisciplinary Science Team (IMST), an independent panel of scientists who evaluate the plan's effectiveness, identify needed changes, and guide research investments.

The Oregon Plan for Salmon and Watersheds (Oregon Plan) remains a foundational framework for the state as it progressively moves forward with its conservation efforts. Implementation of the Oregon Plan since its inception in 1998 has bolstered inter-agency and state-federal coordination and collaboration, independent scientific review and oversight, monitoring and outreach, and engagement of conservation groups and other partners. Watershed Councils, Soil and Water Conservation Districts, and other conservation groups have made significant inroads to watershed health with the engagement of voluntary, citizen stewardship and restoration of watershed habitats.

Implementation

The foundational building blocks of the Oregon Plan are the collective and coordinated actions of natural resource agencies synergistically caring for Oregon's watersheds and salmon. To that end, the State's natural resource agencies all have programs and program-specific initiatives that conserve and protect watersheds and habitats. These habitat-based efforts testify to the continued commitment to carry out the mission of the Oregon Plan, which is to *"to restore our native fish populations – and the aquatic systems that support them – to productive and sustainable levels that will provide substantial environmental, cultural, and economic benefits."*

Relationship to Water

Water is a key component of the Oregon Plan. Most of the natural resource agencies have measures or programs that address water quality and/or water quantity, either indirectly or directly. These programs serve to protect and conserve the aquatic habitats that anadromous and other species of fish and wildlife depend on to survive, throughout their respective life cycles. The coordination and cumulative impact of these programs and measures works to protect and conserve the waters and aquatic habitats of the state. Key programs and measures include:

- ◆ *ODFW:*
 - Application for instream water rights on streams
- ◆ *ODA:*
 - SB 1010 Planning Program - Develop, implement and enforce agricultural water quality management programs in management areas throughout the state.
 - Confined Animal Feeding Operations (CAFO) Program - Conduct inspections, educational outreach, enforcement, and provide technical assistance to ensure water quality is protected.
- ◆ *OWRD:*
 - Administration of water rights.
 - Issuance of instream water rights.
 - Flow Restoration Program - OWRD works with water rights holders to restore streamflows through voluntary flow restoration measures.
 - Water Distribution and Regulation - Distribution/regulation of water use for the protection of senior water rights, including instream rights.
 - Water Use Measurement Strategy – required annual reporting.
 - Water Supply and Conservation Planning – Develop water management and conservation plans with water right holders.
 - Enclosed Livestock Water Delivery Systems – protect and restore riparian areas.
- ◆ *ODEQ:*
 - Nonpoint pollution control program (including Stormwater).
 - Implementation of water quality standards.
 - Development and implementation of TMDLs.
 - Enhanced 401 certifications.
 - Apply for instream water rights on streams with TMDLs.
- ◆ *ODF:*
 - Water quality, aquatic habitat, and riparian protection through the Forest Practices Act.
 - State Forests management.
 - Facilitation of voluntary restoration and enhancement work by private forest landowners and in urban and community forests.
 - Wildfire risk management and suppression.
- ◆ *ODSL:*
 - Removal-Fill Program - water quality protection conditioned in permits.
- ◆ *OWEB:*
 - Grant Program - fund water quality restoration and streamflow protection activities across Oregon.
 - Other Investments – fund Oregon Plan water quality efforts through state agencies.
- ◆ *DOGAMI:*
 - Instream gravel removal, mining and oil and gas extraction – regulatory oversight to protect aquatic and terrestrial habitats.

In addition, watershed councils have completed watershed assessments and voluntary action plans for most major tributaries. A common area of concern (gap) is the lack of necessary monitoring to assess the sufficiency of these programs in conserving and protecting water quality and quantity.

Recommendations

Many agency actions and programs that target water quality and quantity fall within the Oregon Plan framework. Natural resource agencies involved in the IWRS have participated in agency coordination efforts under the Oregon Plan, including the Oregon Plan Core, Monitoring, and Outreach teams. The IWRS may help continue, build upon and strengthen the agency cooperative relationships and efforts developed under the Oregon Plan, including the augmentation of water quality and quantity-related programs. The Oregon Plan framework may also act to fill gaps within the IWRS.

Useful Links / Resources

Oregon Plan website - <http://www.oregon-plan.org/>

Oregon Plan archives - <http://www.oregon-plan.org/OPSW/archives/archived.shtml>

Oregon Plan Biennial Reports - <http://www.oregon.gov/OWEB/publications.shtml>

Watershed Assessments Library -

http://www.oregon.gov/OWEB/MONITOR/watershedassessments_linked.shtml



Climate Change Adaptation Framework

Rob Hallyburton, Department of Land Conservation and Development

Intent

In July 2009, the Land Conservation and Development Commission adopted an interim climate change strategy that directs the agency to begin working on a framework for a state-level adaptation plan for Oregon's built environment, and to coordinate that work with other efforts already underway in other Oregon agencies.

The intent of this effort is to identify: (1) likely future climate conditions and the risks those conditions represent for resources, infrastructure, and communities; (2) actions agencies are taking to address those risks; (3) gaps in state capacity to address those risks; (4) priority short-term actions to address those gaps; and (5) some basis for identifying longer-term priority actions.

Implementation

The framework is not yet finalized. In the meantime, agencies should make sure the materials under development for the framework identify agency actions to prepare for and adapt to future climate conditions. These materials should also identify gaps in state capacity (in terms of authorities, information, staff) to address future climate conditions. Participating agencies include:

- Oregon Fish and Wildlife Department
- Oregon Department of Agriculture
- Oregon Department of Energy
- Oregon Dept. of Environmental Quality
- Oregon Water Resources Department
- Oregon Dept. of Geology & Mineral Industries
- Oregon Department of Forestry
- Oregon Dept. of Land Conservation & Development
- Oregon Department of Human Services: Public Health Division

Relationship to Water

The impacts of climate change are highly likely to affect public health, our forest and agricultural economies, pose risks to our built environment from a number of sources (flooding, wildfire, and landslides), alter our water resources, and challenge already stressed ecosystems.

Major climate effects in the draft framework specifically related to water include: increased incidence of drought, changes in hydrology, water supply, and water quality, and reduced water availability in some basins.

Recommendations

Continue to participate in development of the framework.

Useful Links / Resources

There is no website for the framework yet.

July 2009 Staff Report – Planning for Climate Change (LCDC Interim Climate Change Strategy and Workplan) - http://www.oregon.gov/LCD/docs/rulemaking/072909/item16_climate_change.pdf

A Strategy for Adapting to Impacts of Climate Change on the Oregon Coast –
http://www.oregon.gov/LCD/docs/publications/climate_ready_communities.pdf



Oregon Board of Forestry Strategic Planning

David Mormon

Intent

Of Oregon's 62 million acres, 28.5 million acres are forested.

The Oregon Board of Forestry is a seven-member citizen board appointed by the Governor and confirmed by the Senate. It is empowered by the Oregon Legislature to oversee all forest policy within the jurisdiction of the State of Oregon. The current Board of Forestry defines its mission as: *"Leading Oregon in implementing policies and programs that promote environmentally, economically, and socially integrated and sustainable management of Oregon's public and private forests."*

The *Forestry Program for Oregon* is a central element of the Board of Forestry's framework for strategic planning. The *Forestry Program for Oregon* describes the Board's mission, values, vision, goals, objectives, and indicators of sustainable forest management. The ongoing challenge for the Board is to work both within and outside state government to implement the *Forestry Program for Oregon* goals and objectives to make its vision for the future a reality.

Sixty-percent of Oregon forestland is managed by the federal government – approximately one-quarter of Oregon's total land base. East of the Cascades, 72 percent of Oregon's forestlands are federally-owned. Most of the federal forestlands are at higher elevations, and they are the dominant source of water in the State. Federal forestlands in Oregon are managed mainly by either the USDA Forest Service (USFS) or the Bureau of Land Management (BLM). The National Forest Management Act requires a "land and resource management plan" (forest plan) to be developed by the USFS for each National Forest. Similarly, the BLM is required to develop a plan for each District under the Federal Land Policy and Management Act. A forest plan allocates lands among management areas, each of which is managed for a particular mix of multiple uses. The forest plan also describes the constraints on site-specific projects that may be proposed in a particular area. The constraints contain a set of best management practices, which are applied to projects, to protect water quality and implement state pollution control standards. While the Board of Forestry has no direct authority over the management of federal forestlands, it does exert influence over federal forest policies and management.

Relationship to Water

In 2003, the Board established seven *Forestry Program for Oregon* goals for achieving the sustainable management of Oregon's public and private forests. The Board is in the process of developing a draft 2011 edition of the *Forestry Program for Oregon* based on these same goals. One of the seven goals specifically addresses water—Goal D: *Protect, maintain, and enhance the physical and biological quality of the soil and water resources of Oregon's forests*. For the 2011 edition, the Board is currently proposing the following objectives for Goal D:

1. The Board will use the Oregon Forest Practices Act as the primary means to protect soil productivity and water quality on non-federal forestlands.
2. The Board will promote understanding, acceptance, and support across all land uses for relevant evaluations of water quality conditions based on beneficial uses, and the use of these evaluations

to develop stream protection policies that result in consistent application of state water quality standards across land uses.

3. The Board will promote continued long-term watershed research to study the effectiveness of the most current forestry best management practices in providing protection for soil and water resources and promote the sharing and application of new knowledge.
4. The Board will promote the maintenance of forestland in forest uses and promote the establishment of new forests as key elements in promoting high quality water and protection of soil productivity.
5. The Board will promote forest management that perpetuates the ecological processes—including disturbance dynamics—that contribute to desired aquatic habitat and water quality using a landscape level approach.
6. The Board will support and contribute to continuing statewide efforts under the Oregon Plan for Salmon and Watersheds to enhance, restore and protect Oregon’s native salmonid populations, watersheds, water quality, and fish and wildlife habitat, while sustaining a healthy economy.
7. The Board will recognize that private forest landowners’ contribution to providing Oregonians with high quality drinking water is achieved through compliance with state non-point source water quality standards.
8. The Board will promote management practices that protect forest soil productivity from losses due to human-induced landslides, soil erosion, and soil compaction.

The Board has endorsed 19 Oregon indicators of sustainable forests management to measure progress towards achieving the goals of the *Forestry Program for Oregon*. Three of the 19 indicators address Goal D:

- a. Water quality of forest streams
- b. Biological integrity of forest streams
- c. Forest road risks to soil and water

Initial reports have been produced on water quality and biological integrity, based on Department of Environmental Quality data and analyses. While the data distribution for these two indicators is fairly comprehensive on forest lands across the state, a more rigorous probabilistic sampling is recommended for better landscape and trend assessments. Funding shortages are currently limiting statewide data collection needed for the forest road risks indicator.

Implementation

The *Forestry Program for Oregon* is not an end-product. It is the foundation for discussion and planning, particularly for:

- Federal forests
- State forests
- Private forests
- Urban and community forests
- Wildfire risk management and suppression

The Board hopes to show a clear connection between the Board's goals and objectives, Board work plans and meeting agendas, Department of Forestry programs, and the policies of other natural

resource agencies with responsibilities that affect forestlands. The indicators and the newly-chartered Oregon Roundtable on Sustainable Forests provide a forum for Oregonians to share common interests and information, to address high priority challenges to sustaining our forest resources, and promote broad agreement about how to address forest issues.

All Oregonians are encouraged to work with the Board of Forestry through its business meetings, the Oregon Roundtable on Sustainable Forests, and other forums to:

- Update and implement Board Work Plans;
- Use, review and, if necessary, revise the Oregon indicators of sustainable forest management along with desired trends and targets for the indicators;
- Participate in future Board issue scans; and
- Update the *Forestry Program for Oregon* objectives on a two-year cycle.

Recommendations

1. Recognize and use the Board of Forestry's strategic policy and technical framework for promoting environmentally, economically, and socially sustainable management of all Oregon public and private forest resources, including water;
2. Promote research, assessments, inventories, and monitoring work that informs the Oregon indicators of sustainable forest management;
3. Support adequate funding for administration of the Oregon Forest Practices Act (including compliance and effectiveness monitoring), the Oregon Watershed Research Cooperative, and implementation of the recommendations of the Board of Forestry's Federal Forestlands Advisory Committee;
4. Support adequate Department of Forestry funding for participation in land use planning policy development and statewide forest resources assessments;
5. Encourage ongoing public agency, private organization, and individual citizen participation in the Oregon Roundtable on Sustainable Forests; and
6. Continue to support the Oregon Plan for Salmon and Watersheds.

Useful Links / Resources

- Oregon Board of Forestry and the *Forestry Program for Oregon* - www.oregonforestry.gov.
- Oregon indicators of sustainable forest management reports and information on the Oregon Roundtable on Sustainable Forests - <http://www.oregon.gov/ODF/indicators/index.shtml>.
- Oregon Watershed Research Cooperative - <http://watershedsresearch.org/Home/Home.html>.
- Federal Forestland Advisory Committee final report - [http://www.oregon.gov/ODF/BOARD/docs/FFAC Color Report and Cover for Web.pdf](http://www.oregon.gov/ODF/BOARD/docs/FFAC_Color_Report_and_Cover_for_Web.pdf).



Nature
HISTORY
Discovery

Park's Water Trails Plan and State Scenic Waterways

Alex Phillips, Oregon Parks and Recreation Department

Intent

The intent of the Water Trails Plan, a part of the larger Oregon Trails Plan, is to provide information and recommendations to guide the Oregon Parks and Recreation Department (OPRD) and other agencies in the management of water trail resources. The plan assessed the needs and opinions of Oregon's citizens as they relate to water trail opportunities and management and used the outcomes to identify issues and goals.

Implementation

The Oregon Division of State Lands, Oregon Department of Fish and Wildlife, and the Oregon State Marine Board participated in the development of the plan, which was led by the Oregon Parks and Recreation Department. While participation is voluntary, the agencies must work cooperatively if the plan is to be implemented. OPRD has incorporated the goals of the plan into our Centennial Horizon Plan and into the Water Trails Coordinator's work plan.

The priority list for creation of water trail guides was created by concentrating on rivers that have been declared navigable by the Department of State Lands. These rivers have the most trespass concerns from private land owners.

The plan identified the following issues that need to be addressed:

- Need to address conflicts between non-motorized boaters and waterfront property owners. This conflict is highlighted each time a waterway is declared navigable.
- The need for more public access to waterways.
- Need for adequate information including maps, signs, and level of difficulty.
- Need for safety-related information
- Need for dedicated funding source for water trail development
- Need for information describing the social and economic benefits of water trails

Helpful Links / Resources:

The plan can be found at: <http://www.oregon.gov/OPRD/PLANS/docs/trails/Water.pdf>.

State Scenic Waterways

Intent

Oregon established the Oregon Scenic Waterways Program in 1970, recognizing the importance of wise individual and public use of these special rivers and adjacent lands. The Program strives to achieve a balance between protecting the rivers' natural resources and the equally valuable lives and plans of the people who live along them. The Governor may designate any river or segment of a river and related adjacent land as a scenic waterway subject to the provisions of ORS 390.805 to 390.925.

Implementation

Oregon has one of the most extensive Scenic Waterway systems in the country with more than 1,100 river miles protected. The Oregon Parks and Recreation Department oversees day-to-day management of the recreation resource issues. Most of WRD mandates concerning the Scenic

Waterways stem from ORS 390.835 (1), which states that the highest and best use of the water from scenic waterways are for recreation, fish and wildlife. Placer mining and dams are prohibited. Also, State Scenic Waterway River Management Plans must be reviewed by the Water Resources Commission.

Landowners must notify the Oregon Parks and Recreation Department if they propose to build roads, dwellings, commercial buildings, wind turbines, harvest timber, or conduct mining operations within a scenic waterway. If OPRD has concerns about the proposal, it has one year to negotiate acceptable conditions with the landowner. If negotiations fail, the state must buy the property or allow the project to proceed. Parks also comments on any large scale public utility projects that could harm the protected values of a scenic waterway.

The Water Resources Department works to ensure that no adverse effects to fish, wildlife, and recreation are created by the issuance of any new water rights in or above scenic waterways. Any water rights issued after the mid-1990's are conditioned to allow regulation of the use if data discloses that the appropriation will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway in quantities necessary for recreation, fish, and wildlife.

Water Resources Department hydrogeologists provide technical input for mitigation opportunities in the Deschutes, Grande Ronde, and Klamath Basins to protect Scenic Waterways and instream flows. In the Deschutes, the mitigation program is established in rule and designed to allow development of groundwater using mitigation credits to maintain or improve streamflow within the scenic waterway and the Deschutes Basin.

Relationship to Water

The rivers, streams, and lakes designated as scenic waterways are protected to benefit instream uses, such as protecting the scenic beauty, fish and wildlife, scientific and recreation features, all based upon special attributes of the area.

Recommendations

- Facilitate volunteer streamflow restoration to improve conditions of our scenic waterways.
- Provide guidance on ways to mitigate the interference with a scenic waterway.
- Encourage other state agencies to act consistently with the goals of scenic waterways management.
- Monitor scenic waterways to ensure that flow requirements are being met.

Helpful Links / Resources

Scenic Waterway Map - http://www.oregon.gov/OPRD/RULES/docs/scenic_waterways_map.pdf

OPRD Overview and Rules - <http://www.oregon.gov/OPRD/RULES/waterways.shtml>

Removal-Fill in Scenic Waterways - <http://oregonstatelands.us/DSL/PERMITS/scenicwaterways.shtml>

Landowner's Guide to Scenic Waterways - http://egov.oregon.gov/OPRD/RULES/docs/sww_log.pdf

ORS Chapter 390 - <http://www.leg.state.or.us/ors/390.html>



Willamette River Legacy

Suzanne Knapp, Governor's Natural Resources Office

Intent

The Willamette River Legacy is the Governor's blueprint for restoring and enjoying a healthy Willamette River Basin, from the headwaters to the Columbia and from the Coast Range to the Cascades, with the belief that a healthy river promotes healthy aquatic populations and healthy communities, cities and economies. This Legacy is based and built upon past successful efforts addressing water pollution and the planning and partnerships in place. The continued water-related concerns associated with the loss of fish and wildlife habitat (wetlands, off-channel habitat, riparian areas), lack of sufficient water supply to address current and future needs for supporting ecological and economic values, and loss of floodplain function in the Willamette Valley prompted the vision, formulation and realization of the Willamette River Legacy.

Vision

The Willamette River Basin is of vital environmental, economic and social importance to the state of Oregon. Ensuring that it is healthy for current and future generations is paramount to the state's future. The water must be clean and in sufficient quantities to support both human and wildlife needs. Fish and wildlife populations must be viable and enjoy the variety of habitats needed to sustain them into the future. Willamette Valley communities and citizens will thrive due to the health of the river, and derive many benefits from the recreational opportunities that the river provides.

Three priority focal areas for the Willamette River Legacy Program are: Repair, Restore, and Recreate. High priority actions for each include:

- **Repair**: Cleaning up the industrial pollutants and toxins that have contaminated the river to improve water quality to a swimmable, fishable, drinkable condition throughout the Willamette River Basin.
- **Restore**: Returning the river to its natural state, restoring its important watershed habitats needed to support viable fish and wildlife populations.
- **Recreate**: Reconnecting basin communities and cities with the aesthetic and recreational assets and activities provided by the Willamette River, improving Oregon's quality of life now and for future generations.

Implementation

Many of the agency programs under the Oregon Plan for Salmon and Watersheds, for protecting and conserving aquatic habitats, apply to the Willamette River Legacy. In addition, other state, federal, and special initiatives and other partner efforts are vehicles for implementing the priority actions for each "R". These actions and partnerships are complementary and work synergistically in meeting the Legacy's vision. Significant progress has been made since its inception in 2004 as one of the Governor's top priorities.

➤ Repair:

- Fully implement watershed-based NPDES permitting in the Willamette (DEQ)
- Finalize and implement the Total Maximum Daily Loads for Willamette and its subbasins (DEQ, Designated Management Agencies and entities)
- Superfund cleanups (DEQ, EPA)

- Mine cleanups (EPA, DEQ)
- Toxic pollutant monitoring and evaluation (DEQ)
- Stormwater management
- Restore:
 - Watershed assessments and restoration priorities
 - Governor’s Fund for the Environment
 - BPA wildlife mitigation funding
 - Oregon Solutions
 - ESA Recovery Plan implementation
 - Special Investment Partnership (OWEB)
 - Strategic Action Initiative (Meyer Memorial Trust)
 - Willamette Ecosystem Marketplace (Willamette Partnership)
 - Willamette Atlas (UO, OSU, INR, TNC)
 - Willamette Projects Biological Opinion (Corps, BOR, BPA)
 - Oregon Plan for Salmon and Watersheds (State of Oregon and partners)
- Recreate:
 - Willamette River Water Trail (OPRD)
 - Willamette Valley Scenic Bikeway (OPRD)
 - Willamette Greenway Parklands Strategy (OPRD)
 - Coordinate with Connect Green for network of natural areas (Metro)

Relationship to Water

The focus of the Governor’s Willamette River Legacy is water – specifically the Willamette River. Therefore, all of the 3 “R”s have components related to water. Full implementation of current and future initiatives related to the 3 “R”s would fill the gap that exists in meeting the Legacy’s goals.

Recommendations

Implementation of the IWRS would bolster and strengthen this Willamette River Legacy effort with its integrated and landscape approach to water management. Agency coordination and collaboration, at both the state and federal level, and citizen and partner engagement is crucial for the full realization of all the actions to repair, restore, and recreate on the Willamette. The IWRS could help ensure we are leaving a lasting legacy.

Useful Links / Resources

<http://governor.oregon.gov/Gov/GNRO/docs/willamette-river-legacy-program.rtf>

<http://governor.oregon.gov/Gov/willamette.shtml>

Hydropower and Regional Energy Needs

This page is currently under development. However, there are some helpful links and resources available online.

The **Northwest Power Planning Council** released its Sixth Northwest Conservation and Electric Power Plan in February 2010, with a focus on meeting the region's future power needs through energy conservation programs. See <http://www.nwcouncil.org/energy/powerplan/6/default.htm> to obtain a copy of the report.

Oregon Department of Energy files an *Energy Plan* every two years, providing a snapshot of energy needs and supplies in the state. See <http://www.oregon.gov/ENERGY/docs/EnergyPlan07-09.pdf> for the 2007-2009 report. The report makes the following observations about hydroelectric power: "In a normal water year, hydropower meets about 44 percent of Oregon's electricity demand. 'New' large hydro would be a small player in any likely renewable-generation growth scenario. The future of hydropower lies in developing micro-hydro (or 'seasonal' hydro), such as piped irrigation systems. Run-of-the-river technology, which involves no storage and does not reduce river flows, could also make a contribution in many areas of rural Oregon. Several projects, generally ranging from under 1 megawatt to 12 megawatts are currently in the planning and permitting stages on reservoir facilities around the state." The report also identifies additional water-related energy generation opportunities for the future, including solar thermal, geothermal, wave, and tidal power, and the use of methane from wastewater treatment plants to generate heat and electricity.

A 2003 *Renewable Energy Action Plan*, prepared for the state by the Oregon Department of Energy and partner agencies, describes the same water issues and technologies as the state *Energy Plan* above. See <http://www.oregon.gov/ENERGY/RENEW/docs/FinalREAP.pdf> for a copy of the 2003 report.

Idaho Power filed its 2009 *Integrated Resource Plan* with the Public Utility Commission of Oregon (OPUC) and the Idaho Public Utilities Commission (IPUC) in December 2009. The 2009 IRP addresses supply-side resources and demand-side measures, planning period load forecasts, potential resource portfolios, risk analysis, and near-term and long-term action plans, included continued development of technologies such as solar, wind, biomass, and natural gas-fired plants, which use significant volumes of cooling water. See <http://www.idahopower.com/AboutUs/PlanningForFuture/irp/2009/default.cfm> for the full 2009 IRP, appendices, summaries and analysis.

Portland General Electric also has an *Integrated Resource Plan*: http://www.portlandgeneral.com/our_company/news_issues/current_issues/energy_strategy/default.aspx

Pacific Power's *Integrated Resource Plan* website: <http://www.pacificpower.net/about/irp.html>



Department of Geology and Mineral Industries Strategy for Geologic Mapping

Vicki S. McConnell, DOGAMI

Strategic Plans and Goals of the Agency

A primary goal of DOGAMI is to acquire and organize complete and current descriptions of the geologic resources, materials, landforms, processes, and hazards to benefit the people of Oregon. Groundwater is recognized as an important natural resource. The geology of the Oregon's watershed basins provides data for modeling the quantity and availability of groundwater in three dimensions. A second goal is to develop lidar-based digital elevation models for the bare earth surfaces of watershed basins. These highly accurate elevation maps have become crucial to watershed and stream restoration plans, wetlands development, modeling channel migration, and fish passage design. Through its Mineral Lands Regulation and Reclamation Program, DOGAMI advocates voluntary mined land restoration in the flood plains to benefit stream health.

Implementation

Geologic mapping is conducted under a cost share program with the National Cooperative Geologic Mapping Program, administered by the US Geological Survey. The Oregon StateMap Advisory Committee with participation from the state natural resource agencies, conservation organizations, academia, local governance, and the private sector advises DOGAMI on those areas of the state that need detailed geologic mapping. Groundwater resource issues and surface water quality are frequently the factors that drive mapping priorities. In the case of lidar data collection, the primary partner is the Oregon Watershed Enhancement Board, which identifies areas of high priority for watershed actions.

Recommendations

Geologic mapping and data collection takes time - frequently several years to compile all the relevant information. This is true of lidar data collection and processing as well. It would be worthwhile for the Integrated Water Resources Strategy to identify where geologic and lidar data and information will be crucial over an extended timeframe.

Helpful Links / Resources:

DOGAMI Strategic Plan - <http://www.oregongeology.org/sub/pub%26data/dogami-stratplan-2009-2015.pdf>

Lidar Data Viewer - <http://www.oregongeology.org/sub/lidardataviewer/index.htm>

Oregon Geospatial Data Compilation - <http://www.oregongeology.org/sub/ogdc/index.htm>

National Cooperative Geologic Mapping Program webpage (USGS) - <http://ncgmp.usgs.gov/ncgmpabout>