Building Strong Collaborative Relationships for a Sustainable Water Resources Future:

STATE OF OREGON

SUMMARY OF STATE WATER PLANNING

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The findings contained in this report are based on the information collected from the literature search and interviews for this initiative and should not be construed as an official Department of the Army position, policy or decision unless so designated by other official documentation.

STATE OF OREGON

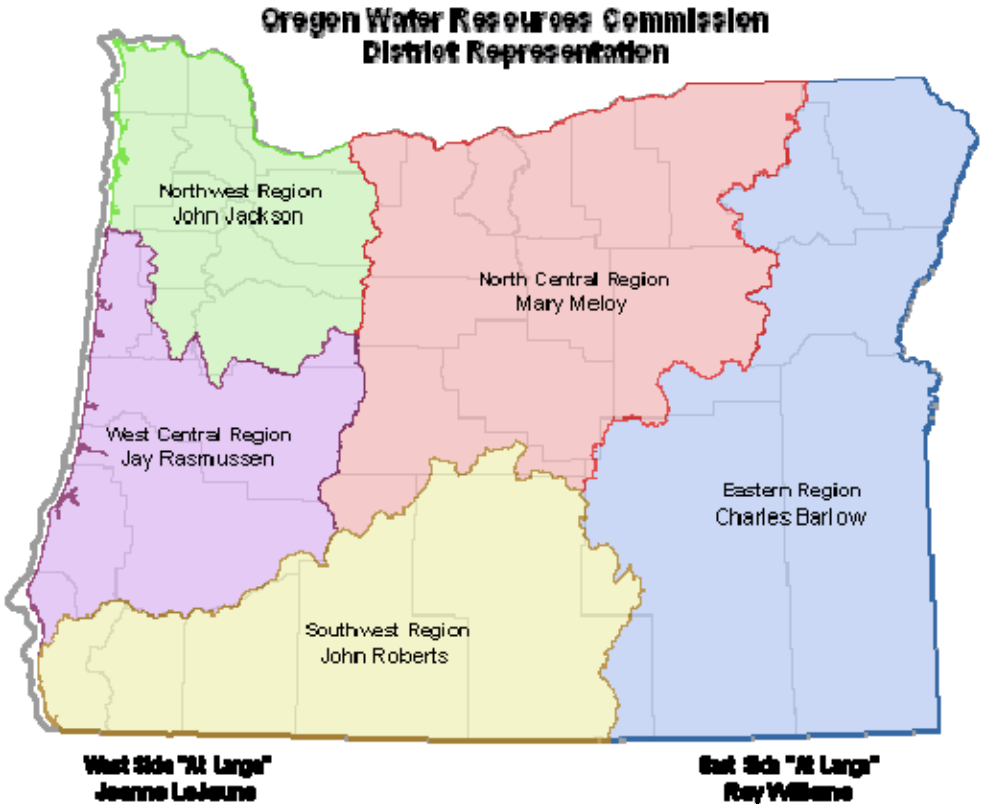

Figure 1. WRC District Map (WRD, 2009(f))

1. RESPONSIBLE STATE AGENCIES/REGIONAL ENTITIES

Oregon Water Resources Department (WRD)

The WRD is the state agency charged with administration of the laws governing surface and ground water resources. The agency's staff manages the programs that allocate the state's water, protect existing rights, and plan for future uses. The WRD is organized into five divisions: Field Services, Technical Services, Water Rights and Adjudications, Administrative Services, and the Director's Office – all operating under the immediate authority of the Director.

The director of the Water Resources Department is appointed by the Governor to a four-year term, subject to state Senate confirmation and is responsible for carrying out the water management policies and rules set by the Water Resources Commission as well as overseeing the enforcement of state water laws.

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Oregon Water Resources Commission (WRC)

The Water Resources Commission is comprised of 7 members representing 5 different geographic areas of the state and includes two "At Large" representatives from both the eastern and western regions of the state. Members are appointed by the Governor and confirmed by the Oregon State Senate to serve four-year terms. The duties of the WRC include setting water policy for the state as well as overseeing the activities of the Water Resources Department in accordance with state law. The Water Resources Department utilizes its various resources including staff, data, and public comment to advise the Commission in formulating administrative policy.

Oregon Department of Environmental Quality (DEQ)

The primary agency responsible for water quality planning and management in the state of Oregon is the Oregon Department of Environmental Quality.

Oregon Watershed Enhancement Board (OWEB)

The OWEB is a state agency that promotes and funds voluntary actions that strive to enhance Oregon's watersheds. It is led by a 17 member board in charge of policy oversight. The primary actions of the OWEB are:

- Funding projects that restore, maintain, and enhance the state's watersheds.
- Supporting the capacity of local watershed-based citizen groups to carry out a variety of restoration projects.
- Promoting citizen understanding of watershed needs and restoration ideas.
- Providing technical skills to citizens working to restore urban and rural watersheds.
- Monitoring the effectiveness of investments in watershed restoration.

2. STATE/REGIONAL WATER PLANNING STATUS

Oregon does not currently have a formal comprehensive state water plan; however, the state does administer several programs and initiatives that serve as vital elements for statewide water resource planning and management. Oregon is one of two western states without a formal water supply plan (WRD 2008). Oregon has completed preliminary studies exploring future water demand as well as opportunities for water conservation and storage. The WRD website offers a link to a seven question survey with the purpose of gathering input to aid in the designing of a process for a statewide strategy (WRD, 2009(b)).

Oregon is currently considering legislation that would enable the Oregon Water Resources Department (WRD), in partnership with the Oregon Department of Environmental Quality (DEQ) and their stakeholders to develop an integrated water resources strategy "to address Oregon's water supply needs and to restore and protect stream flows and watersheds in order to ensure the long-term sustainability of Oregon's ecosystems, economy and quality of life." Senate Bill 193, introduced into the 75th Oregon Legislative Assembly – 2009 Regular Session, proposes the development of an integrated water resources strategy for the state of Oregon. If approved this bill would "clarify the lead role of the Oregon Water Resources Department (WRD) in the development of an integrated water resources strategy" (WRD, 2008(b)). The Oregon Department of Environmental Quality (DEQ) will also play a part in the development of the statewide strategy by contributing water quality narratives and data. The bill states that the WRD shall develop the state water resources strategy in consultation with state, local, and federal agencies, as well as other states, Indian tribes, stakeholders, and the public.

If passed the bill declares that the Oregon Water Resources Commission (WRC) and the Environmental Quality Commission shall review and update the strategy every five years and that any revisions will take effect once adopted by the commissions. The bill also calls for a report detailing benchmarks and progress toward the development of the state water resources strategy to be submitted to the 76th Legislative Assembly by February 1, 2011. Completion of the first strategy, if fully funded, is slated for December 12, 2012.

The primary document guiding water quality planning in Oregon is the Oregon Plan for Salmon and Watersheds. This plan addresses not only water quality, but also habitat restoration and protection at the watershed level. Watershed councils and soil and conservation districts lead the efforts of the plan in many watersheds along with a group of partnering state, federal, tribal, and non-governmental agencies and organizations including the WRD and the DEQ.

3. WATER MANAGEMENT VISION AND GOALS

The WRD's stated mission is: *To serve the public by practicing and promoting responsible water management through two key goals:*

- *To directly address Oregon's water supply needs.*
- *To restore and protect streamflows and watersheds in order to ensure the long-term sustainability of Oregon's ecosystems, economy, and quality of life.*

As part of the WRD's Sustainability Plan (discussed in detail in the following section), several goals have been set forth for managing Oregon's water resources:

- *Manage new ground water withdrawals in the Deschutes River Basin in a sustainable manner.*
- *Promote long-term water supply planning, water use efficiency, and conservation.*
- *Sustainable ground water – surface water management.*
- *Implement voluntary streamflow restoration to meet instream flow needs.*
- *Anticipate the possible effect of global warming on long-term water supplies.*

The WRD's 2008 Oregon Water Supply and Conservation Initiative resulted in several products that provide a foundation for long-term planning including:

- A statewide demand forecast
- An inventory of potential water conservation projects
- An inventory of potential above-and below-ground water storage projects
- Grant funding for community and regional planning efforts, and
- Basin-yield and peak flow analysis (not yet funded in the 2007 to 2008 budget)

For additional information please see
http://www1.wrd.state.or.us/pdfs/OWSCI_rept_leg_1_30_09.pdf

The DEQ's mission is, "to protect and improve Oregon's water quality." The DEQ accomplishes their mission by developing and implementing water quality standards and clean water plans, regulating sewage treatment systems and industrial dischargers, collecting and evaluating water quality data, providing grants and technical assistance to reduce non-point pollution sources, and providing loans to communities to build treatment facilities.

4. SCOPE OF WATER RESOURCE PLANNING

The existing framework of planning and management is focused primarily at the watershed and community levels. The WRC adopts basin programs and sets policies for managing river basins (WRD, 2009(e)).

Population is projected to grow by one million people by 2030 while the state's water infrastructure needs are expected to double, placing added stress to Oregon's water supply and emphasizing the need for long term water supply planning. Leaders in Oregon have recognized the need for both a water supply plan, and an integrated statewide strategy plan for water resources. As laid out by Senate Bill 193, if fully funded, the state's integrated water resources strategy would include the following as part of its overall scope:

- *Objectives of the strategy*
- *Actions designed to achieve the objectives of the strategy*
- *Plans related to the challenges presented by climate change*
- *Additional factors, including but not limited to population growth and land use change*
- *Communications and partnerships with key stakeholders*
- *Specific functions and roles for other state agencies, included but not limited to the State Department of Fish and Wildlife, the State Department of Agriculture, the State Forestry Department, the Department of Human Services, the Economic and Community Development Department, the Department of Land Conservation and Development, the Oregon Watershed Enhancement Board and the State Parks and Recreation Department*
- *Public policy and recommendations*

In its 2009 to 2011 Strategic Outlook the WRD identifies some of the state's current, short-term, and long-term challenges. Issues of primary significance include ensuring sustainable water supply through conservation and improved efficiency, protecting senior water right holders and in-stream needs through existing laws, better understanding the nature of the state's surface and ground water resources through improved data collection and reporting, and working to develop studies that will improve water resources decision making abilities as they pertain to climate change (WRD, 2009 (d)).

The following is an overview of some of the programs, initiatives, and legislation in place concerning water supply and water quality planning in Oregon.

Oregon Water Supply and Conservation Initiative

Oregon Legislature funded the Oregon Water Supply and Conservation Initiative in 2007. Its results provide a foundation for the integrated water resources strategy proposed by SB 193. The initiative consists of four components. These include developing a statewide water demand forecast extending to 2050, creating an inventory of potential conservation projects in Oregon, constructing an inventory of potential water storage sites, and providing matching grant funding for community water supply planning. Sixteen community grants designed to fund long-term water supply planning efforts were awarded in 2008. The Department submitted a final report on the Oregon Water Supply Initiative to the Oregon Legislature January 31, 2009.

Because many of the elements required in the community water supply plans funded by the initiative are also required under the Drinking Water Section of the state Department of Human Services and the Department of Land Conservation and Development, water suppliers can create a single master plan to meet the stipulations of all three programs. As a result, the state agencies involved in the oversight and funding of municipal water supply projects which include the Oregon Economic and Community Development Department, the Oregon Health Division, the WRD, and the Department of Land Conservation and Development along with the USDA Rural Utilities Service, the Rural

Community Assistance Corporation and the Oregon Association of Water Utilities developed a Guideline for Community Water Project Planning in 2001(Oregon Economic and Community Development Department et al., 2001). WRD staff has also held workshops to help communities develop water management and conservation plans.

WRD Municipal Water Management and Conservation Planning Program

Many suppliers are required to develop plans under water right permit conditions; as of 2002 communities seeking long-term permit extensions are required to prepare plans that demonstrate the communities' needs for increased diversions of water under the permits as their demand grows.

Recently, the Department co-hosted training sessions with the Oregon Water Resources Congress (OWRC) to ensure that irrigation districts had the most recent guidance about writing their Water Management and Convservation Plans. The Department has also teamed with the League of Oregon Cities (LOC), Special Districts Association of Oregon (SDAO), and Oregon Water Utilities Council (OWUC) to provide similar materials and guidance for municipal water suppliers. For more details, please see: http://www.wrd.state.or.us/OWRD/mgmt.shtml#Water_Convservation.

Water Conservation, Reuse and Storage Program

Future increases in water demand and future scarcity of supplies have led state lawmakers to develop policy that seeks to examine and address water conservation, reuse and storage projects. In an effort to provide funding for "up-front costs" of feasibility studies, the Oregon Legislature approved the Water Conservation, Reuse and Storage Grant Program in 2008. Oregon Senate Bill 1069 states that the Water Resources Department shall establish a grant program to pay local governments or Indian Tribes the qualifying costs of planning studies performed to evaluate the feasibility of developing a water conservation, reuse or storage project. Planning studies may include but are not limited to:

- Analyses of hydrological refill capacity
- Water needs analyses
- Refined hydrological analyses
- Engineering and financial feasibility studies
- Geologic analyses
- Water exchange studies
- Analyses of by-pass, optimum peak, flushing and other ecological flows of the affected stream and the impact of a proposed water conservation, reuse or storage project on those flows
- Comparative analyses of alternative means of supplying water
- Analyses of environmental harm or impacts from a proposed water conservation, reuse or storage project
- Analyses of public benefits accruing from a proposed water conservation, reuse or storage project

- Fiscal analyses of a proposed water conservation, reuse or storage project
- Hydrological analyses of a proposed water conservation, reuse or storage project
- Analyses of potential water quality impacts of the project

Under this program, the Water Resources Commission awarded a total of $1 million to 22 communities for water conservation, reuse and storage feasibility studies.

WRD Allocation of Conserved Water Program

The Oregon Legislature passed the statute authorizing the Allocation of Conserved Water Program in 1987. The Program allows water users who conserve water to use a portion of that water on additional lands, for lease or sale, or for dedication to instream use. The Program encourages technological and methodological improvements for diverting, transporting, applying, or recovering water as well as other approved water conservation measures. The law requires that a portion of the conserved water be allocated to the state for instream use; 25 percent to the state and 75 percent to the applicant unless the applicant proposes a higher allocation to the state or more than 25 percent of the project costs come from state or federal non-reimbursable funds. Trends indicate a recent growing interest in the Program compared to the first decade of its existence.

WRD Sustainability Plan

Released in 2004, the vision of the Oregon Water Resources Department Sustainability Plan is to seek a balance between the growing and competing demand for the state's water and the state's natural resource-related industries, communities, and cultures both in the short-term and in the long run. Also key to the Plan is ensuring that resource management programs contribute positively to the health of Oregon's watersheds, species recovery, and tribal trust obligations (WRD, 2004).

The Sustainability Plan focuses on:

1. Facilities and Operations
2. Resource Management
3. Education and Outreach
4. Regulatory Streamlining

Headwaters to Ocean (H2O): Strategy for Meeting Oregon's Water Needs in the Face of Climate Change

Governor Kulongoski has enacted the Headwaters to Ocean (H2O) initiative as a strategy for meeting the water resources needs of Oregon in the face of climate change. The goal of the H2O Strategy is to, "Achieve sustainable[1] water supplies and quality to benefit Oregon's people, communities, economy, environment and ecosystems, and fish and wildlife." The Strategy outlines water resources challenges faced by the state of Oregon relating to ground water, surface water, stored water, source water protection, and administrative challenges. The Strategy focuses on:

- Protecting and enhancing water quality of Oregon's surface and groundwater supplies.
- Meeting Oregon's need for water today and in the future through development of more efficient water use, better conservation practices and investment in new water storage and supply projects.
- Balancing the beneficial uses of water with meeting the need for water to provide ecosystem benefits.

The first draft version of the Governor's H2O Strategy was produced in May of 2008, at which time it became available for public comment. The Strategy proposes a funding structure consisting of a guaranteed investment for a minimum of 10 years using a source supported by the state legislature and ratified by Oregon voters. The draft Strategy includes plans to fund various state agencies' water resource management efforts at a total cost of $100,350,000 over the life of the investment. Under the Strategy the money is to be spent on water quality, water supply, and ecosystem service-based programs (H2O, 2008). The Governor's Recommended Budget for 2009 to 2011 proposes $3.3 million for water resources management and investment. According to the Governor's Natural Resources Office website, this amount is less than is required to support all the recommended actions of the H2O Initiative (H2O, 2009).

The Oregon Plan

The Oregon Plan for Salmon and Watersheds or the Oregon Plan, began in 1995 as the Oregon Coastal Salmon Restoration Initiative with the original focus on the recovery of coastal coho salmon and improvement of water quality statewide. In 1997 the Plan was expanded by the state Legislature to address native fish, wildlife, and water quality throughout the state. The Oregon Plan has four elements:

1. Coordinated state and federal agency and tribal actions to support private and voluntary restoration efforts, effectively implement regulatory programs, soundly manage public lands, and promote public education and awareness about watersheds and salmon.
2. Voluntary restoration actions by private landowners - individuals and industry, rural and urban- with support from citizen groups, businesses, and local government.
3. Monitoring watershed health, water quality, and salmon recovery to document existing conditions, track changes, and determine the impact of programs and actions.
4. Strong scientific oversight by the Independent Multidisciplinary Science Team, an independent panel of scientists who evaluate the plan's effectiveness, identify needed changes, and guide research investments (Oregon Plan 2009).

Watershed councils and soil and conservation districts lead the efforts of the Plan in many watersheds along with a group of partnering state, federal, tribal, and non-governmental agencies and organizations including the WRD and the DEQ.

According to the Oregon Nonpoint Source Control Program Plan (2000), "The Oregon Plan for Salmon and Watersheds is Oregon's primary initiative to address issues of habitat and water quality that adversely affect salmonid populations and other sensitive beneficial uses of the State's waters." Aquatic habitat and water quality is also protected through the 1987 Instream Water Right Act which legally recognizes instream flows as a beneficial water use. Much of the effort behind the Oregon Plan is focused on watershed-scale restoration of riparian, wetland, and upland habitats in Oregon. The efforts of the plan are funded through the Oregon Lottery following a 1998 citizen initiative.

Oregon Nonpoint Source Control Program Plan

Section 319(b) added to the Federal Clean Water Act in 1987, requires that states produce a Nonpoint Source Management Plan covering at least a four-year timeframe. The most recent version of the plan posted on the Oregon Department of Environmental Quality website is a version updated in 2000, which covers an implementation schedule of 2000 to 2004.

The NPS program shares many of the objectives of The Oregon Plan and its approach to nonpoint source pollution control is based upon the basic concepts of The Oregon Plan. The overarching goal of Oregon's Nonpoint Source Control Program Plan is, "The prevention or control of NPS pollution such that none of the beneficial uses of water is impaired by that pollution."

WEB Strategy for Achieving Healthy Watersheds in Oregon

In 2001 the Oregon Watershed Enhancement Board (OWEB) developed a strategic plan called "A Strategy for Achieving Healthy Watersheds in Oregon". The Plan lays out three broad outcomes designed to achieve the Board's vision "To help create and maintain healthy watersheds and natural habitats that support thriving communities and strong economies" (WEB 2001). The outcomes are effective and accountable investment in watershed health, partnering to achieve watershed health, and citizen understanding of watershed health. The OWEB plan discusses 11 strategies designed to accomplish those outcomes.

Oregon Groundwater Quality Protection Act of 1989

The Oregon Groundwater Quality Protection Act of 1989 (ORS 468B.150-190) sets statewide goals, "to prevent groundwater contamination while striving to restore and maintain the high quality of Oregon's groundwater resources for present and future uses". The DEQ is the agency with the primary responsibility for implementing the state's ground water protection program through partnerships with local, state, and federal agencies along with private organizations, businesses and individuals. Due to limited resources the program places its focus on targeted areas where significant problems have been identified.

Emergency Water Management Planning

The Oregon Department of Land Conservation and Development (DLCD) is the state agency that provides protection of people and property from natural hazards, accomplished through "sound land-use planning". Oregon Revised Statute Chapter 197 states that all local governments must prepare and administer comprehensive land use plans and programs that address state and federal floodplain standards. The DLCD has prepared a natural hazard planning guide (DLCD 2000) to assist cities and counties in developing comprehensive land use plans. Related to water resources, the planning guide addresses floods and coastal issues.

During times of drought the WRD has the authority to issue emergency water use permits. Statutory authority to apply rules related to drought mitigation activities are granted to the Governor and the WRC during "extraordinary drought situations" (as authorized by ORS 536.720 through 536.780 "Emergency Water Shortage Powers"). During a drought period the Commission or the Director of the WRD may take the following actions:

- Allow emergency water use under the terms of emergency use permits without first conducting a hearing under ORS 537.170.
- Waive the notice requirements under ORS 537.753 and the report required under ORS 537.762 pertaining to water well construction.
- Allow a temporary exchange of water as allowed under ORS 540.533 without first giving notice as required under ORS 540.535.
- Grant preference of use for human consumption, stock watering.
- Allow a temporary change in use, place of use or point of diversion of water under the terms.

Also under the administrative rules, when the Commission or Governor declares that a severe or continuing drought is likely, it may order state agencies and political subdivisions to prepare and file water conservation or curtailment plans.

Watershed Councils

The 1995 Legislature passed House Bill 3441 providing guidance in establishing watershed councils which are to be voluntarily created by local governments to act as non-regulatory groups who represent the interests in the basin. The watershed councils develop partnerships with residents as well as local, state, and federal agency staff in order to integrate local watershed protection efforts. Watershed councils work to develop and implement projects to maintain and restore the biological and physical processes in the watersheds for the sustainability of their local communities. Their primary contribution to comprehensive planning in the state is by providing local knowledge and coordinated review of land management plans to local, state, and federal decision makers.

The Network of Oregon Watershed Councils, established in 2004, creates a coordinated support system for the state's watershed councils. The Network has developed a strategic plan for the time period 2007 to 2010. The plan sets a strategy designed to:

1. Build watershed council capacity.
2. Cultivate relationships with key partners.
3. Raise public awareness of watershed councils.

5. PARTNERSHIPS, STAKEHOLDER, AND PUBLIC INVOLVEMENT

Senate Bill 193 proposing a statewide integrated water resources strategy states that the WRD shall work in close consultation with the DEQ. Key partnerships have already been formed in the pre-planning stages. Oregon has worked with communities in creating a cost-share program for developing long-term water supply plans and held workshops with representatives from California and Washington in discussing their experiences related to statewide water resources planning. Plans are in place to continue to foster relationships with various stakeholders including other state, local, and federal agencies, other states, Indian tribes, and with the public.

The WRD has many partnerships with state agencies. These partnerships include, but are not limited to, Oregon Department of Fish & Wildlife (ODFW), Oregon Parks & Recreation Department (OPRD), Department of Environmental Quality (DEQ), Division of State Lands (DSL), Oregon Economic and Community Development Department (OECDD); Department of Human Resources Health Division, Department of Land, Conservation, and Development (DLCD) Oregon Watershed Enhancement Board (OWEB), and the Oregon Housing & Community Services (OHCS)

Oregon partners with several federal agencies as part of its water resources policies and programs including:

- Bureau of Land Management
- The Bureau of Reclamation
- Federal Energy Regulatory Commission
- U.S. Department of Agriculture
- U.S. Environmental Protection Agency
- U.S. Forest Service
- U.S. Geological Survey
- U.S. Army Corps of Engineers

Oregon works as a partner with surrounding states with shared river basin borders in order to facilitate coordinated development, use, conservation, and policy. Two examples of major partnership efforts include the Klamath River Compact with California and the Bureau of Reclamation, enacted into law in 1957, and the Columbia River Gorge Commission with Washington and the U.S. Forest Service, established in 1987.

Both the WRD and the DEQ hold meetings where input from the general public is encouraged. The agencies websites both have links to calendars of scheduled events open to public participation (WRD 2009 (c) (DEQ 2009 (a).

The Oregon Watershed Enhancement Board provides technical assistance to citizen groups to help them in planning and implementing watershed restoration projects. It aims to achieve its desired outcomes of effective and accountable investment in watershed health through partnering to achieve watershed health and citizen understanding of watershed health.

The Oregon Water Resources Department has a website to communicate with the public, e.g., publish results of the Water Supply and Conservation Initiative. WRD staff has also held workshops to help communities develop water management and conservation plans. The WRD Sustainability Plan focuses on outreach and education.

Oregon Groundwater Quality Protection Act of 1989 is implemented through groundwater protection programs in concert with partnerships with local, state, and federal agencies, private organizations and business, and individuals.

The Network of Oregon Watershed Councils raises awareness of watershed councils and their needs and work.

6. PLAN IMPLEMENTATION STRATEGY

Because Oregon's statewide integrated water strategy is still in the beginning stages a complete implementation strategy has not been set. In May of 2008 the WRC began its analysis of the fundamental elements that should be included in a long-term water conservation and supply strategy. More recently, in November 2008, the Commission held a workshop that examined how to ensure public input, determine the primary focus of a water resource strategy, and secure the viability of a water resource strategy.

As stated above, the integrated water resources strategy will be reviewed and updated by the WRC every five years, and any revisions will require adoption by both the WRC and the Environmental Quality Commission, a five-member citizen panel appointed by the Governor to act as the DEQ's policy and rulemaking board.

7. OUTCOMES AND ASSESSMENT

Existing state water resources planning efforts are overseen by the WRD and WRC. Each year an Annual Performance Progress Report (APPR) is prepared by the WRD. This report is designed to evaluate the progress of the agency's water resources programs examining 13 key performance measures. The measures and the level of progress toward their accomplishment are published in the APPR. The performance measures were developed by the WRD and staff from the Oregon Progress Board with the goal of building a stronger link to the Department's Oregon Benchmark (OMB 79: Percentage of

key streams meeting minimum flow rights), its mission and goals, and high-level performance outcomes. The key performance measures are:

1. Flow restoration
2. Protection on instream water rights
3. Monitor compliance
4. Streamflow gauging
5. Assessing ground water resources
6. Equip citizens with information (percent of water management related datasets collected by the agency that are available to the public on the internet)
7. Equip citizens with information (number of times water management related data was accessed through the internet)
8. Deleted during the 2007 Legislative Session but reserved for future use
9. Promote efficiency in water management and conservation plan review
10. Promote efficiency in water right application processing
11. Promote efficiency in transfer application processing
12. Promote efficiency in field staff regulatory activities
13. Promote efficiency in administrative transactions
14. Customer Service

The most recent APPR available on the WRD's website (Fiscal Year 2006 to 2007) states that progress is being made in 12 of the key performance measures. For additional information please see
http://www.wrd.state.or.us/pdfs/OWRD_Annual_PM_Report_2008.pdf

The bill for the future statewide integrated water resources strategy declares that the Oregon Water Resources Commission (WRC) and the Environmental Quality Commission shall review and update the strategy every five years and that any revisions will take effect once adopted by the commissions. The bill also calls for a report detailing benchmarks and progress toward the development of the state water resources strategy to be submitted to the 76th Legislative Assembly by February 1, 2011.

8. NEEDS, CHALLENGES AND CRITICAL PRIORITIES - INTERVIEW INSIGHTS

The state of Oregon does not have a comprehensive water planning process. The state is currently considering legislation to undertake comprehensive planning. Water resource management activities are conducted at the program level. Through comprehensive planning the state believes they can accomplish a number of important goals including:

- Developing a more clear and specific vision for the state over the next 50 years. This will help the state develop a road map and benchmarks to achieve this vision.
- The planning process will also help the state prioritize resources and time.
- Increased stakeholder and public participation.
- Planning will help address climate change, drought and other uncertainties.

- Developing greater consensus among stakeholders should also help the state gain support for funding.

Several of the key needs and challenges facing the state include:

- Water scarcity; many people incorrectly think Oregon is a high precipitation state but this is only true for the western edge of the state near the coastline and then mainly in the winter. The central and eastern side of the state is dry. The state is starting to see fully appropriated surface water in many areas and is experiencing increased use and reliance on groundwater.
- Population growth is a current and future challenge. Growth in more pristine areas is and increasing trend.
- Climate change is expected to change how Oregon will receive precipitation, preliminary information suggests that he state will see the same amount precipitation but as rain not snow, and this is anticipated to affect water storage and reservoir operation.
- Declining staff, need for more data work, permitting volume are also challenges and increased funding would help alleviate this issue.
- There is a need for continued stream gauging, maintenance of stream gauges and groundwater monitoring.
- The state has experienced significant conflict between environmental and tradition water uses (agriculture) especially in the Klamath River basin.
- Interstate issues on the Columbia River have been a challenge and efforts to develop a Compact have been unsuccessful.
- The operation of Federal reservoirs, United States Army Corps of Engineers owned, Bureau of Reclamation manages the contract water "pool", and a Biological Opinion have created uncertainty of water supply for users dependant on these reservoirs.
- Providing more federal assistance and funding could be helpful but the current process does not work. The high overhead is not an ideal contractual relationship (i.e., USACE current model). Providing grants directly to the states would provide more flexibility and be more cost effective. Cost is very high with USACE partnerships, and the state can get the same work accomplished with someone in state for less cost.

While there are a number of needs and challenges the state is optimistic that more detailed and comprehensive planning will allow successful resolution of many of these and other emerging issues.

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