Headwaters to Ocean (H_2O) Advisory Group White Paper

The H_2O Advisory Group met throughout July and August to provide input to the Governor's Headwaters to Ocean (H_2O) Initiative. This White Paper reflects the group's discussions and brainstorming efforts. The composition of the H_2O Advisory Group is diverse, and not every Advisory Group member supports every proposal outlined below. However, the group committed to considering the items below as a package, pending further discussion. Although the state revenue forecast may present a challenge for programs relying on general funds, the Advisory Group would rather see a modest "starter budget" across all five issue areas in 2009-2011, rather than funding one item in place of another.

In general, the group recognizes the need to engage in long-term planning, while simultaneously addressing very pressing and critical water needs in Oregon's communities. The group favors a two-track approach to water issues, encouraging the state to begin some long-term investments in planning and data collection, while addressing immediate concerns in four other areas: water supply and conservation, pollution prevention and reduction, measurement of water use, and ecosystem services.

Below is a brief description of each issue area, along with examples of programs and budget requests.

1. Planning and Data Collection

Planning

The Advisory Group drafted a legislative concept (LC #663), designed to build upon already existing statutory language in ORS 536.220. The new language (see Appendix A) specifically charges the Water Resources Department (WRD), in cooperation with the Department of Environmental Quality (DEQ), with responsibility for developing and implementing an integrated water resources strategy for Oregon.

Budget requests for 2009-11 to support this LC currently exist in the following Policy Option Package (POPs):

WRD #102: *Developing and Communicating an Integrated Water Conservation and Supply Strategy*. This package includes three FTE to develop water demand forecasts, public outreach, and technical support for this multi-agency effort. (DEQ will include any resource needs to support this LC in the Fiscal Impact Statement associated with the bill.)

Data Collection

One essential component to long-term planning is access to accurate information about baseline conditions of Oregon's water quantity and quality. The group suggests four areas that need greater state investments in data collection and monitoring: ground water, surface water, pollution/toxics, and targeted monitoring in agriculture, forest, and urban lands. Group members also suggest pursuing resources to increase the state's stream gaging network.

The state agencies have the following related monitoring POPs among their 2009-11 budget proposals:

Pkg #413: *Monitoring for Climate Change*. This is a multi-agency package from DEQ, WRD, Oregon Department of Agriculture (ODA), and Oregon Department of Fish and Wildlife (ODFW) focused on surface water quantity, quality, and habitat.

WRD #101: *Ground Water – Addressing Critical Resource Needs*. The Department is currently unable to meet statutory time-line requirements for reviewing ground water applications in a timely manner, and requires staff to develop the data, to consult with local governments, to respond to supply conflicts, and to conduct timely ground water application reviews. This request includes two hydrogeologists to coordinate data monitoring and resources characterization across Oregon, one Aquifer Storage and Recovery (ASR) hydrogeologist, and one support staff position.

WRD #115: *Re-establishing Ground Water Research Funds*. The Department is charged with characterizing the extent, location and capacities of Oregon's ground water resources. This is accomplished through completion of basin-wide ground water studies that identify aquifer boundaries, define water budgets, identify competing needs, and quantify the impacts of future allocations on senior users and the resource. This package requests $800,000 in funds to cost share with the US Geological Survey (USGS) and to leverage other funds to conduct the detailed ground water research necessary for managing Oregon's ground water resources in a sustainable manner.

DEQ #126: *Coastal Beach Monitoring*. This package continues 1.2 limited duration positions at DEQ to coordinate with the Department of Human Services (DHS) and conduct the monitoring and analysis of Oregon's coastal beaches for bacteria.

2. Water Supply and Conservation

Several Oregon communities are experiencing very real and immediate water supply shortages. Surface water during summer months is almost completely allocated, and as Oregon relies increasingly on ground water resources, water levels have dropped precipitously in some areas of the state. Critical Ground Water Areas have been declared in the Umatilla Basin, the Willamette Valley, and locations in Eastern Oregon. Without solutions in place, water supply shortages will increase in future years due to projected population growth of another 1 million people by 2030, and changed timing and form of precipitation resulting from climate change.

Conservation is one important source of water, and is a key component of Oregon's water supply portfolio. The H2O Advisory Group discussed several options for encouraging water conservation in Oregon. These include: setting state-wide targets for demand reduction; providing economic incentives such as a Water Efficiency Tax Credit; initiating funding eligibility requirements, encouraging the development of water basin plans; increasing participation in the state's allocation of conserved water program; showcasing pilot projects; and ensuring that agricultural, municipal, industrial, and other water users have the technical resources they need to implement best management practices.

This last item is addressed in WRD POPs #106 and 117.

Communities are pursuing the benefits of a regional approach to water conservation and supply. Additional in-house engineering and technical capability will be needed to assess the proposed water conservation and supply projects expected to develop during the next several years, as a result of increased feasibility study grants, regional partnerships, and community planning efforts.
The following WRD POPs address water supply and conservation needs and will facilitate regional efforts:

WRD #106: *Providing Regional Water Conservation and Supply Technical Assistance and Outreach*. This package proposes five regional experts (NRS 3) to provide the technical assistance and tools to help communities implement regional water supply solutions through conservation, re-use, storage, planning, and partnership. These individuals will also be well versed in Department instream lease and transfer programs designed to protect instream flows.

WRD #117: *Building a Water Conservation and Supply Engineering Team*. This package includes a senior engineer to assist communities with technical evaluations of proposed projects, as well as one conservation specialist, and a data/web technician.

Grants

In 2007, the Oregon Legislature provided funds for community water-related planning grants. In 2008, the Legislature made grant funds available to conduct feasibility studies for water conservation, re-use, and storage projects. In its 2009-11 budget proposal, WRD will request funding to continue these programs and launch a third grant program to support the next phase in project development: implementation and construction. Funds for these three grant programs - planning, feasibility studies, and implementation - are reflected in the following POPs:

WRD #130: *Funding Community-based Water Conservation and Supply Planning*. With funds from the 2007 Oregon Water Supply and Conservation Initiative, the Department recently awarded grants totaling $155,000 to 11 communities for use in their water supply planning efforts. These awards were meant to help communities that are taking a regional planning approach to meeting their current and future water needs. More than 30 applicants responded, requesting more than $600,000 in total, clearly demonstrating the need for funding assistance with regional water planning. This package requests $200,000 to continue to meet community needs in this area.

WRD #107: *Water Conservation, Re-use, and Storage Feasibility Studies* Grants (SB 1069, continued). The Department administers a state-wide feasibility studies grant program, launched under SB 1069 (2008 Laws) and designed specifically to remove the obstacles to feasibility studies for water conservation, re-use, and storage projects. The initial investment of $1,750,000 in the water project feasibility studies program does not address the current need to invest in future planning for water supplies. The Department is requesting $5 million to continue the program, as well as continuation of two staff to administer the grants and grant application process.

WRD #108: *Funding Water Conservation and Supply Implementation*. The Department anticipates the need for project implementation funding as a follow-up to SB 1069 or other similar feasibility study efforts. This budget package is a request for $50 million in Lottery Revenue-backed bonds to capitalize a fund for subsequent project development. One such project could be the construction of the Umatilla Basin Aquifer Recovery Project. For any grants awarded, the Fund could be replenished with future legislative appropriations. For any loans, the Fund will be replenished with repayments from the borrower. See the Department's 2009 Legislative Concept, "Providing Flexibility to the Water Conservation, Reuse and Storage Fund," as an accompanying document.

3. Pollution Prevention and Reduction

Although the state has a number of pollution abatement programs, there is strong interest in beginning a comprehensive pollution prevention program that would intercept and dispose of pollutants before they ever reach Oregon's surface or ground water. The group discussed the benefits of having pollution prevention experts who could provide technical assistance statewide, as well as addressing four specific pollutants of interest: pesticides, storm water, septic systems, and pharmaceuticals. Concepts included: investing in the state's pesticide stewardship program; establishing a sustainable storm water program to provide technical assistance; developing a pollution prevention circuit rider and technical assistance program; a domestic well assistance program; and a drug take-back program.

DEQ's 2009-2011 budget proposal includes the following POPs that address pollution prevention and reduction:

DEQ #129: *Pesticide Stewardship Partnerships*. This package requests resources to fully fund the work of five existing pesticide stewardship partnerships and expand the program to three additional watersheds. These partnerships focus on the prevention and reduction of pesticide pollution.

DEQ #121: *Ongoing Implementation of Senate Bill 737*. This package provides for the full implementation of the provisions of SB 737, including the development of plans by the 52 largest municipal wastewater treatment plants to reduce persistent pollutants through pollution prevention and toxics reduction.

DEQ #166: *Restore Onsite Septic System Program*. This package restores existing positions that are unaffordable in the 2009-11 biennium to conduct plan and site reviews for onsite septic systems.

DEQ #132: *Product Stewardship for Waste Products*. This package and associated legislative concept (LC 888) will provide a framework for producer responsibility for the end-of-life management of discarded products, such as paint, pharmaceuticals, and compact fluorescent light bulbs, to reduce a products impact on human health and the environment.

4. Measurement of Water Use

The Water Resources Commission's 2000 Water Measurement Strategy directs WRD to improve water use measurement by focusing limited staff and resources on "significant diversions" within "high priority" watersheds.* WRD has identified approximately 2,200 significant diversions in high priority watersheds, representing only 10 percent of the overall number of diversions, but about 50 percent of the volume of water diverted. Water users must measure their diversions if they are government entities (see ORS 537.099) or if they have special permit conditions. WRD also encourages voluntary measurement of diversions whenever measurement is not required.

Advisory group members discussed the need for further work related to the Water Resource Commission's 2000 Water Measurement Strategy for significant diversions in high priority watersheds. Group members drew up a Legislative Concept to that effect, attached in Appendix B.

The following WRD 2009-11 budget request addresses water measurement:

WRD #116: *Measuring and Reporting Surface Water Use*. This POP requests resources to increase water-use measurement and reporting in both mandatory and voluntary programs. The package includes four full-time equivalents (FTE) to provide technical assistance and data processing of measurements, as well as $100,000 in cost share funding for water-use measurement devices. Funds will be deposited into the Water Measurement Cost Share Program Revolving Fund (ORS 536.021) and expended as Other Funds.

5. Ecosystem Services

High winter flows and spring run-off are important for sustaining and supporting rivers and streams, as well as the species and communities that depend on them. The state must understand and protect the flows that are necessary to meet the ecological needs of fish and other species and to create and maintain instream habitat. Responsible water management requires balancing out-of-stream needs with instream needs.

Advisory group members indicated interest in several efforts: a continued study of the peak flows needed for healthy fish and habitat, with participation by ODFW; protection of such flows during WRD's permitting, funding, and other project activities; and funding for a pilot watershed project that would demonstrate quantification and protection of peak flows.

In 2009-11, the following agency POPs address ecosystem services, and in particular, flow issues:

WRD #413: *Monitoring for Climate Change*. This is an interagency POP focused on surface water measurement. WRD is requesting funding for one surface water hydrologist to conduct detailed basin yield and peak flow analyses. WRD anticipates that this investigation would take several years to conduct, using already-existing data. The

* "Significant Diversions" are diversions more than five cubic feet per second (cfs), and ones that take a high percentage of available streamflow. "Priority watersheds" have the greatest biological needs and greatest restoration opportunities; there are almost 300 such watersheds in Oregon.

request also includes climate change research funds ($300,000), the ability to update WRD stream gages and satellite receiving stations ($275,000), and 2 FTE to process stream gage data.

ODFW #105: *Fresh Water Management*. This package will allow the agency to more fully address water right application reviews, provide analysis of impacts to fish and wildlife resources, assist in resolving water use requests with instream flow needs, and continue to address flow issues related to the Oregon Plan for Salmon and Watersheds.

Relating to a long-term integrated water resource strategy; creating new provisions; and amending ORS 536.220.

Whereas, the Oregon Legislative Assembly directs the Water Resources Commission to study existing water resources of this state; means and methods of conserving and augmenting water resources; and existing and contemplated needs and uses of water;

Whereas, the Water Resources Commission and Water Resources Department have as their goals to directly address Oregon's water supply needs, and to restore and protect streamflows and watersheds in order to ensure the long-term sustainability of Oregon's ecosystems, economy, and quality of life;

Whereas, surface water is almost completely allocated across the state and ground water levels have declined precipitously in several areas;

Whereas, the Legislative Assembly notes that proper utilization and control of the water resources of the state can be achieved only through a coordinated, integrated state water resources policy, through plans and programs for the development of such water resources;

Whereas, water quantity, water quality, and ecosystem services are inextricably linked;

Whereas, to develop a coordinated and integrated state water resources policy, along with attendant strategies and tools, it is important for the Oregon Water Resources Department (OWRD) to work closely with the Oregon Department of Environmental Quality (DEQ) and consult with other natural resource agencies;

Whereas, the development of long-term, integrated water resources strategy is an iterative and collaborative process;

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

536.220 Policy on water resources generally. (1) The Legislative Assembly recognizes and declares that:

(a) The maintenance of the present level of the economic and general welfare of the people of this state and the future growth and development of this state for the increased economic and general welfare of the people thereof are in large part dependent upon a proper utilization and control of the water resources of this state, and such use and control is therefore a matter of greatest concern and highest priority.

(b) A proper utilization and control of the water resources of this state can be achieved only through a coordinated, integrated state water resources policy, through plans and programs for the development of such water resources and through other activities designed to encourage, promote and secure the maximum beneficial use and control of such water resources, all carried out by a single state agency.

(c) The economic and general welfare of the people of this state have been seriously impaired and are in danger of further impairment by the exercise of some single-purpose power or influence over the water resources of this state or portions thereof by each of a large number of public authorities, and by an equally large number of legislative declarations by statute of single-purpose policies with regard to such water resources, resulting in friction and duplication of activity among such public authorities, in confusion as to what is primary and what is secondary beneficial use or control of such water resources and in a consequent failure to utilize and control

such water resources for multiple purposes for the maximum beneficial use and control possible and necessary.

(2) The Legislative Assembly, therefore, finds that:

(a) It is in the interest of the public welfare that a coordinated, integrated state water resources policy be formulated and means provided for its enforcement, that plans and programs for the development and enlargement of the water resources of this state be devised and promoted and that other activities designed to encourage, promote and secure the maximum beneficial use and control of such water resources and the development of additional water supplies be carried out by a single state agency which, in carrying out its functions, shall give proper and adequate consideration to the multiple aspects of the beneficial use and control of such water resources with an impartiality of interest except that designed to best protect and promote the public welfare generally.

(b) The Water Resources Department shall, in coordination with the Department of Environmental Quality, develop an integrated state water resources strategy and tools (collectively, the "strategy") designed to meet Oregon's instream and out-of-stream water needs. Such work shall be conducted in consultation with other state, local, and federal agencies, other states, tribes, and private entities as appropriate.

(c) In carrying out these functions the Water Resources Department shall, in coordination with the Department of Environmental Quality, develop data on an ongoing basis that forecast Oregon's instream and out-of-stream water needs and water availability.

(d) The Oregon water resources strategy shall provide a discussion of water needs, including: water supply, water quality, and ecosystem services needs. It shall also provide a discussion of the following:

1. state-wide objectives to meet the above-mentioned needs;
2. strategies for achieving these objectives;
3. adaptation strategies related to climate change;
4. identification of additional pressures such as population growth and land-use change;
5. communication and partnership with key stakeholders;
6. specific function and roles for additional state agencies, such as the Oregon Department of Fish and Wildlife, Oregon Department of Agriculture, Oregon Department of Forestry, Oregon Department of Human Services, Oregon Economic and Community Development Department, Oregon Department of Land Conservation and Development, Oregon Watershed Enhancement Board, and other agencies as needed;
7. public policy options and recommendations.

(e) The state water resources strategy shall take effect after ratification by the Water Resources Commission and Environmental Quality Commission. These Commissions shall review and update the state water resources strategy every five years.

(f) The Water Resources Department shall, in coordination with the Department of Environmental Quality, submit a report to the 2011 Oregon Legislature, detailing progress toward Oregon's water resources strategy.

(g) The Water Resources Department, in coordination with the Department of Environmental Quality, may submit budget recommendations and suggested legislative amendments in 2011 to develop and implement Oregon's water resources strategy. These

requests may include recommendations for a long-term, dedicated funding source.

([~~*b*~~] **h**) The state water resources policy shall be consistent with the goal set forth in ORS 468B.155. [1955 c.707 §1; 1989 c.833 §53]

Appendix B: Legislative Concept #662 Draft 10/16/08

The Oregon Water Resources Department is directed to:

1. Implement the elements of the Oregon Water Resources Commission's 2000 Water Measurement Strategy and require measurement and reporting of significant diversions in high priority watersheds by 2012.

2. Convene a balanced Task Force to investigate and pursue measuring significant [and/or other] diversions outside of high priority watersheds and to develop recommendations and a timeline to implement such a program, should it be determined to be beneficial.

3. The Department shall provide a report to the Oregon Legislature no later than [2011 or 2013].

4. Pursue available source of public and private funding to support the water measurement cost-share revolving fund established by the 2001 Legislature (ORS 536.021). Eligibility criteria for funding would be created if such criteria do not already exist. Any measurement and reporting requirements in (1) above or as may develop will not be linked to the ability to obtain funds from the revolving fund.

5. Pursue funding to increase substantially the capacity and number of sites in the state's stream gaging network.

Appendix C: Summary of Budget Requests

Draft 10/16/08

Issue Area and Policy Option Package		Dollar Amount
Planning		
WRD 102:	An Integrated Water Conservation and Supply Strategy	$473,520
Data Collection		
WRD 101:	Ground Water: Addressing Critical Resource Needs	$ 638,710
PKG 413:	Monitoring for Climate Change (inter-agency pkg)	†$4,872,133
WRD 115:	Re-establishing Ground Water Research Funds	$800,000
DEQ 126:	Coastal Beach Monitoring	‡$218,297
Water Conservation and Supply		
WRD 106:	Regional Water Conservation and Supply Technical Assistance	$738,855
WRD 117:	Building a Water Conservation and Supply Engineering Team	$493,189
Water Conservation and Supply (Grants)		
WRD 130:	Funding Community-Based Water Conservation and Supply Planning	$200,000
WRD 107:	Water Conservation, Re-use, and Storage Feasibility Studies Grants	$5,264,514
WRD 108:	Funding Water Conservation and Supply Implementation	§$55,000,000
Pollution Prevention and Reduction		
DEQ 129:	Pesticide Stewardship Partnerships	$1,022,000
DEQ 121:	Ongoing Implementation of Senate Bill 737	**$494,000
DEQ 166:	Restore Onsite Septic System Program	††$528,000
DEQ 132:	Product Stewardship for Waste Products	‡‡$281,264
Water-Use Measurement		
WRD 116:	Measuring and Reporting Surface Water Use	$729,609
Ecosystem Services		
WRD 413:	Monitoring for Climate Change	($1,082,618 already counted above)
ODFW 105:	Fresh Water Management	$850,000
Total General Fund		**$13,869,015**
Total Lottery Revenue (Lottery-Backed Bonds and Debt Service)		**$55,000,000**
Total Lottery Fund		**$2,529,515**
Total Other Fund		**$1,205,561**
GRAND TOTAL		**$72,604,091**

† General Fund = $2,342,618. Lottery Fund = $2,259,515
‡ Other Fund limitation; pass through federal funds from DHS
§ Lottery-backed Bonds and Debt Service
** Other Fund limitation = $178,000; General Fund = $316,000
†† Other Fund limitation
‡‡ From existing fees