

MEMORANDUM

To: Oregon's Global Warming Natural Resources Subcommittee
From: Joe Whitworth and Phil Ward, Co-Chairs of the Water Subcommittee
Subject: Recommendation on Adaptation in the Face of Climate Change
Date: September 15, 2008

The Water Subcommittee began its work somewhat contemporaneously with the initial release of the H2O Initiative concept, both accelerating and complicating the role and process of the subcommittee. H2O continues to develop, influenced by budget realities and formal reaction to the draft as written.

The Global Warming Commission has charged its Natural Resource Committee with developing and/or commenting on the policy and budget initiatives emanating from resource agencies focused on the water resource. As per the charge given to us, the Co-Chairs set about convening issue experts and stakeholders to establish the intellectual foundation necessary to evaluate policy and budget ideas, and prepare recommendations and actions going forward, rather than delving immediately into evaluation.

Given a somewhat charged environment of water discussions, the subcommittee co-chairs made a tactical decision to focus on "no regrets" adaptation policies related to climate disruption and the anticipated impacts on freshwater resources. This approach helped keep the discussion constructive and define themes that could generate a degree of durable consensus. Two sessions focused on the current state of Oregon's freshwater resources (M. Campana), the regional impacts of climate change (A. Hamlet), and water use efficiency strategies in both municipal (L. Stickel) and agricultural (M. English) settings.

While much learning and work remains going forward, the group began to coalesce around a set of key concepts to guide development of adaptation strategies for freshwater resources in the face of a changing climate.

Key Adaptation Strategy Recommendations (see last page for dollar figures):

1. Integrated Water Resource Planning

- Develop a strategy to quantify and meet all instream and out-of-stream water needs
 - Water Resources Department (WRD) and Department of Environmental Quality (DEQ) as authors with formal review and input from other agencies and affected stakeholders re: how the strategy adequately addresses their respective mandates/missions
 - Product: By 2011, present a roadmap of where to go and a recommendation for long-term funding and implementation
 - Budget requests for 2009-11 to support this concept currently exist in WRD's Policy Option Package (POP) #102.

WRD #102: "Developing and Communicating an Integrated Water Conservation and Supply Strategy" includes three FTE to further 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.)

2. Climate change modeling, water monitoring, measurement, data collection, and research

- Fully implement Oregon Water Resources Commission's Water Measurement Strategy by 2012 and examine additional water-use measurement strategies
- Fund the ongoing development of water demand forecasts and water resource data, which include basin yield, peak flow, and ground water analyses.
- Fund targeted statewide, regional, and watershed-level research into climate change impacts on water resources
- Support near-term pilot projects that conduct monitoring, measurement, and data collection necessary to quantify conservation goals of these projects
 - State agencies have the following related monitoring Policy Option Packages among their 2009-11 budget proposals:

Multi-Agency Package #413: "Monitoring for Climate Change" is an inter-agency package focused on surface water quantity, quality, and habitat. For WRD, this request includes 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. The 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.

WRD #115: "Re-establishing Ground Water Research Funds" is a request for \$800,000 on a biennial basis to cost share detailed ground water research with the U.S. Geological Survey and others. The Department uses the resulting data to understand and manage Oregon's ground water resources.

WRD #116: "Measuring and Reporting Surface Water Use" is a request to increase water-use measurement and reporting in both mandatory and voluntary programs. The package includes 4 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.

3. Water conservation and supply development

- Develop conservation strategies (demand reduction, increased efficiency, etc) that unlock new supply either as a threshold or concurrent requirement for moving ahead with other supply strategies (see page 3 below).
 - Use conservation-predicated pilot projects to inform future funding
 - Implement monitoring to set baseline and conservation goals
 - Allow for credit for existing conservation success to count toward supply project prerequisites
- Investigate additional environmentally appropriate supply strategies available for communities, including storage (both natural and active), reuse, etc.

- The Water Resources Department has the following related Water Conservation and Supply Development Policy Option Packages among its 2009-11 budget proposals:

WRD #106: “Providing Regional Water Conservation and Supply Technical Assistance and Outreach,” 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” includes a senior engineer to assist communities with technical evaluations of proposed projects, as well as one conservation specialist, and a data/web technician.

- Water Conservation and Supply Grants for Communities. 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. Funds for these three grant programs—planning, feasibility studies, and implementation—are reflected in the following POPs:

WRD #130: \$200,000 Grant Program – “Funding Community-Based Water Conservation and Supply Planning”

WRD #107: \$5 Million Grant Program – “Water Conservation, Re-use, and Storage Feasibility Studies Grants”

WRD #108: \$50 Million Grant Program – “Funding Water Conservation and Supply Implementation”.

These strategies will require that we increase the pace and amount of information gathering necessary to inform long-term decision-making (directed research, measuring/monitoring, analysis, etc). At the same time, these recommendations suggest some first steps in implementing promising adaptation strategies. Though some principled pilot testing makes sense, the key to adapting Oregon’s water resource management to climate change impacts lies not in rushing to implement a host of actions. The key lies in first gathering good information and testing promising strategies to inform long-term plans, and then capitalizing on that momentum to instigate meaningful, broadly-supported adjustments to Oregon’s water resources management.

Summary of Budget Requests Mentioned Above

Issue Area and Policy Option Package	Dollar Amount
<u>Integrated Water Resources Planning</u>	
WRD 102: An Integrated Water Conservation and Supply Strategy.....	\$473,520
<u>Data Collection</u>	
WRD 413: Monitoring for Climate Change (WRD's share of an inter-agency pkg).....	\$1,082,618
WRD 115: Re-establishing Ground Water Research Funds.....	\$800,000
WRD 116: Measuring and Reporting Surface Water Use.....	\$729,609
<u>Water Conservation and Supply</u>	
WRD 106: Regional Water Conservation and Supply Technical Assistance.....	\$738,855
WRD 117: Building a Water Conservation and Supply Engineering Team	\$493,189
WRD 130: Grant--Funding Community-Based Water Conservation & Supply <u>Planning</u> .	\$200,000
WRD 107: Grant--Water Conservation, Re-use & Storage <u>Feasibility Studies</u> Grants.	\$5,264,514
WRD 108: Grant--Funding Water Conservation & Supply <u>Infrastructure</u>	* \$55,000,000
Total General Fund	\$9,782,305
* Total Lottery Revenue (Lottery-Backed Bonds and Debt Service)	\$55,000,000
GRAND TOTAL.....	\$64,782,306