

## **September 15-16, 2009 OWEB Board Meeting Executive Director Update #C-6: Research Program**

### **Background**

OWEB's Research Program has evolved over the past several years and at recent Board meetings staff have provided updates and requested approval of funding priority climate change and other research. The status of those recent research projects is described in detail below.

### **Update on Climate Change Research Awards**

#### **A. Sea-level Rise**

In March of this year, the Board allocated \$100,000 in research non-capital funding, pending additional staff work, for climate change and sea-level rise research. OWEB staff participated in several conference calls with representatives from the states of Washington and California as well as the Oregon Governor's Natural Resources Office to discuss the draft proposal to the National Academy of Sciences (NAS) on a sea-level rise study for the entire west coast of the conterminous U.S. The State of California has been leading this effort under an Executive Order by Governor Schwarzenegger signed in November of 2008. Subsequent to the OWEB Board meeting in March, California met with the NAS and secured the necessary \$500,000 to conduct a study with a reduced scope, including the elimination of the concept of case studies. The case studies were an important aspect of the work presented to the Board.

OWEB staff participated in several conference calls with representatives of Washington and California and the Governor's Natural Resources Office, to discuss the draft proposal. Through these coordination efforts, additional resources were secured from the State of Washington. While the case-study components of the study have been removed, staff suggested and the Board agreed that participating in the west coast wide evaluation, but at a reduced rate, is likely to yield valuable information for the State of Oregon. OWEB has been working on the contracting process with the State of California, but the agreement has been delayed largely due to significant budgetary related furloughs in that state. Staff continue to exchange contract drafts with staff in California.

#### **B. At the Local Level**

At the June Board meeting, staff presented work conducted by the Climate Leadership Initiative (CLI) at the University of Oregon in the Rogue and upper Willamette basins. Staff proposed supporting similar work in the Umatilla, Klamath, and lower Willamette basins over the coming year through the support of a research grant to the CLI. The discussion at the Board meeting included resolving concerns raised about two factors that required additional information. The Board allocated \$171,128 to enter into an agreement to initiate this work in the basins named above. Staff worked with the CLI staff to finalize the agreement and at the time of writing this staff report, final draft materials were being prepared.

In addition to the program described above, staff learned of two efforts in their formative stages based out of Oregon State University, the University of Oregon, and other northwest universities. The first is an attempt to establish the Pacific Northwest Center for Long-Term

Environmental Decision-making (Center) which would offer services to analyze and develop alternatives to societal and environmental challenges associated with global climate change. The proposal, if funded by the National Science Foundation, includes the establishment of Research, Education, and Human Resource Development, and Outreach and Engagement programs to comprise the Center. The second is a proposal to the National Oceanic and Atmospheric Administrations, Regional Integrated Sciences and Assessments (RISA) program to develop the type of program that the University of Washington has with the Climate Impacts Group here in Oregon. The Climate Impacts Group is currently funded through NOAA's RISA program. The Oregon model is designed to be built with input from local stakeholders in landscape and watershed management. The effort includes building new models based on localized climate predictions and establishing hydrologic changes due to changes in weather patterns. Staff provided letters of support for both project proposals.

### **C. Water Availability**

At the March 2009 Board meeting, the Board allocated \$175,000 in research non-capital funding to a water availability and climate change project pending due diligence work to be conducted by staff. OWEB staff spoke to and met with the Oregon Water Resources Department (OWRD) staff on several occasions following the March Board meeting. The purpose of those discussions was to ground-truth the draft water availability study, coordinate with OWRD on related studies, establish OWRD participation in the design and implementation, and to explore additional partnership opportunities. The primary researcher considered for this work had extensive surgery and was out of the state for an extended period of time, so discussions have been delayed. At the time of writing this report, efforts were underway to reschedule meetings between the researcher and OWRD.

### **D. Soil Carbon Storage in Juniper Ecosystems**

Following the June Board meeting, staff initiated an agreement with Yale University to assist in funding a graduate research project in southeastern Oregon focusing on the carbon storage potential and budget in juniper landscapes with different management treatments. The Monitoring and Research Board Subcommittee was consulted and agreed to provide \$4,430 in Research non-capital to assist with the completion of this project which is scheduled for early next summer. The findings will provide an indication of the value and capability of nearly five million acres currently in range of western juniper in Oregon. This project will be one means of better understanding both OWEB investments in western juniper restoration and ecosystem services provided in an under-studied segment of the state.

## **Other Research Projects**

### **A. LiDAR – Research Capital Funding**

During the 2007-2009 biennium, OWEB experienced an increase in the number of local groups requesting funding for Light Detection and Ranging (LiDAR) remote sensing applications for the purpose of project planning, design, and implementation. In 2008 and 2009, the Department of Geology and Mineral Industries (DOGAMI) led efforts around the state to acquire LiDAR imagery, in part, through \$1.5 million of Measure 66 Research capital funding provided by the Legislature. As grant request for LiDAR were received by OWEB from local entities, staff put them in contact with DOGAMI efforts which lead to increased efficiencies, lower cost projects, higher quality products, and larger areas flown.

Since the June 2009 Board meeting, OWEB staff met with DOGAMI and solicited ideas from key stakeholders to inform the selection of the areas of highest priority for acquiring LiDAR imagery in Oregon. In priority order, the Deschutes SIP area (Upper Deschutes and Crooked River basins), Klamath Basin, portions of the Willamette Valley (without current imagery), and Willow Creek (tributary to the Malheur River) were selected. The \$500,000 provided to DOGAMI by the Legislature will not be sufficient to pay for all of the priority areas, but DOGAMI and OWEB have been rounding up other funding to stretch the dollars further. Pending large funding opportunities include possible contributions from the Bureau of Reclamation, U.S. Forest Services, and Bureau of Land Management. Current plans include initiating flights in the Deschutes Basin in September if possible.

### **B. Ecosystem Workforce Evaluation**

At the January 2009 Board meeting, OWEB staff requested Board approval to contract with the University of Oregon (UO) to prepare an estimate of the economic impact and job creation from OWEB's restoration investments. Work with the UO Ecosystem Workforce Program occurred over the spring and summer to enter into an agreement and to conduct this study. Results from the preliminary analysis were provided to the Board at the March and June meetings.

The work to date includes research, analysis, and development of a model to demonstrate the relationship between watershed restoration investments and local economic impacts and job creation. Recently, watershed councils and soil and water conservation districts were polled by UO students and staff about their use of contractors and other job creating activities. Representatives from UO will be mining the OWEB grant files to generate additional information following the polling of local stakeholders. Future Board updates will include a presentation by the researchers summarizing their findings and recommendations.

### **C. Ecosystem Services**

An update for this work is provided under Agenda Item H at this meeting.

### **Staff Contact**

If you have questions or need additional information, please contact Greg Sieglitz, Monitoring and Reporting Program Manager, at [greg.sieglitz@state.or.us](mailto:greg.sieglitz@state.or.us) or 503-986-0194.