



# Oregon

## Oregon Watershed Enhancement Board

775 Summer Street NE, Suite 360

Salem, OR 97301-1290

(503) 986-0178

FAX (503) 986-0199

[www.oregon.gov/OWEB](http://www.oregon.gov/OWEB)



### MEMORANDUM

**TO:** Oregon Watershed Enhancement Board

**FROM:** Greg Sieglitz, Monitoring and Reporting Program Manager

**SUBJECT: Agenda Item: Other Business**  
**March 18, 2015 OWEB Board Meeting**

#### **I. Introduction**

This report provides an update regarding the Upper Middle Fork John Day River Intensively Monitored Watershed (IMW) and requests the board approve \$72,456 for implementation of the IMW.

#### **II. Background**

Staff presented before the Board at the July 2014 Board meeting in The Dalles on the Upper Middle Fork John Day Intensively Monitored Watershed project (IMW). At that time, the Board approved funding that had recently been provided by the Pacific States Marine Fisheries Commission (PSMFC) to OWEB in support of the project.

Over the span of the IMW, 2007-present, the Board has provided additional funding to critical aspects of this large study that are not funded with the PSMFC contributions due to their limited availability. The Board's investment has allowed priority monitoring work for answering important watershed scale questions to continue to meet the study objectives. Examples of past Board IMW investments include: the geomorphology and groundwater monitoring, water quality sampling using fiber optic cables, and the PacFish/InFish Biological Opinion landscape scale systematic surveys. This report requests funding for work of the North Fork John Day Watershed Council and Washington State University in support of their respective roles in the IMW for the next year.

#### **III. Roles of Watershed Council and Washington State University**

The North Fork John Day Watershed Council serves in the capacity of providing: temperature, macro-invertebrate, and watershed discharge monitoring. This work is central to the IMW goals evaluating the current conditions and any future changes in water temperatures in-stream, macro-invertebrate communities and overall water yield resulting from watershed restoration work within the context of natural variability. Water temperature and macro-invertebrate changes have already been detected and additional information will be captured over the next two years under this funding request. Related tasks will also include reporting, data management and coordination. More detailed information is found in Attachment A.

Washington State University participates in the IMW through a PhD candidate studying the relationships between habitat restoration and fish productivity primarily through macro-invertebrate analyses. Specific information about this work is found in Attachment A.

**VI. Recommendation**

Staff recommend the Board award \$65,342 to the North Fork John Day Watershed Council and \$7,114 to Washington State University in support of the Intensively Monitored Watershed from the Effectiveness Monitoring line item in the spending plan. The award to the North Fork John Day Watershed Council will be effective starting March 18, 2015.

Attachments

- A. North Fork John Day Watershed Council and Washington State University actions and budget for 2015 IMW work.

## **2015 Scopes of Work and Budget**

### **North Fork John Day Watershed Council**

#### **Temperature Monitoring**

The North Fork John Day Watershed Council (NFJDWC) is in charge of deploying and collecting 43 temperature loggers along the mainstem Middle Fork and its tributaries. Loggers will be deployed in April and then collected in November. Before the loggers are deployed, they are checked to ensure that their calibration is within an acceptable range. These loggers are checked throughout the season to ensure that they are still installed properly and functioning.

#### **Macroinvertebrate Monitoring**

Between the months of July and October, both benthic and drift macroinvertebrate samples will be collected. Benthic macroinvertebrate sampling is conducted on the South and Middle Forks of the John Day River (the South Fork is used as a reference for the Middle Fork). On each river, there are 10 sampling sites. Drift macroinvertebrate sampling is done only on the Middle Fork and consists of 14 sampling sites. Nets are placed in the river and left for at least 3 hours before they are collected.

#### **Discharge Monitoring**

Discharge monitoring occurs at 12 sites along the mainstem Middle Fork and its tributaries. Gaging stations will be installed at each site in April and the loggers will then be deployed at the gaging stations. In order to develop a rating curve for each site, discharge will be measured a minimum of 9 times (though likely more) throughout the spring and summer using a Marsh-McBirney flow meter.

#### **Project Coordination Activities**

These tasks include working with other partners in the IMW, attending meetings, site visits, compiling and analyzing water quality and macro-invertebrate data, project implementation, and planning tasks.

### **Washington State University**

Macro-invertebrate monitoring was initiated in 2009 to determine biological responses to restoration activities. This is in line with the goals of the IMW, which are to understand the causal mechanisms between stream habitat restoration and changes in fish production at the watershed scale. Based on the needs of the Middle Fork IMW to analyze both the benthic and drift macroinvertebrate results in preparation for the final report in 2017, a WSU PhD candidate proposes to assist the Middle Fork IMW in 2015 with the analysis of these macroinvertebrate results.

Specific questions that will be answered include the following:

1. How have management actions affected the macroinvertebrate communities and thus the ecological status assessment of each site within the Middle Fork IMW?

2. How comparable are the Pacfish/Infish Biological Opinion (PIBO) and NFJDWC samples since the PIBO sampling method utilizes a different sampling method with a larger sampling area compared to the NFJDWC samples?
3. How do restoration activities affect passive drift of macroinvertebrates?

<b>BUDGET CATEGORIES</b>	<b>NFJDWC BUDGET</b>	<b>WSU BUDGET</b>	<b>TOTAL</b>
Salaries, Wages and Benefits	\$45,637	\$5,737	\$51,374
Contracted Services	\$8,000	\$0	\$8,000
Travel	\$2,879	\$349	\$3,228
Materials/Supplies	\$1,826	\$100	\$1,926
Equipment/Software	\$1,060	\$0	\$1,060
Other	\$0	\$0	\$0
<b>Subtotal</b>	\$59,402	\$6,186	\$65,588
Fiscal Admin	\$5,940	\$928	\$6,868
<b>TOTAL</b>	<b>\$65,342</b>	<b>\$7,114</b>	<b>\$72,456</b>