

February 28, 2006

## MEMORANDUM

**TO:** Oregon Watershed Enhancement Board

**FROM:** Ken Bierly, Deputy Director

**SUBJECT: Agenda Item D: Restoration Priorities Update  
March 15-16, 2006 OWEB Board Meeting**

### **I. Introduction**

This staff report asks the Board to adopt the format and approach to establishing regional priorities for restoration projects for the Willamette and Rogue basins. The priorities are intended to be used as guidance by OWEB in the review of grant applications and to help ensure a clear and strategic approach to prioritizing the funding of projects. Formal administrative rules will be proposed to define how the priorities will be used when priorities are completed for the whole state.

### **II. Background**

The Board has identified the development of funding priorities as a significant need for project review and evaluation in OWEB's grant program. In September 2002, the Board authorized staff to contract for the facilitation of efforts to develop restoration priorities in two pilot basins. The development of regional restoration priorities also comes from statutory direction. ORS 541.371(c) states that OWEB: "*Shall establish statewide and regional goals and priorities that shall become the basis for funding decisions by the board. In adopting such goals and priorities, the board shall adopt priorities for grant funding based on the Oregon Plan and on measurable goals. In carrying out this function, the board shall consider local economic and social impacts among the criteria.*"

Staff presented to the Board a report on the principles for restoration prioritization in January 2004. The five restoration principles are:

1. Restore Watershed Connectivity Limiting Key Fish and Wildlife Populations;
2. Restore Watershed Processes Impacting the Aquatic System, Water Quality-Limited Streams, and Wildlife Habitat;
3. Restore Key Habitats and Water Quality for ESA-Listed Species;
4. Reduce or Eliminate Human Impacts and Inputs into Watersheds from Land Use Activities in the Basin; and
5. Address the Symptoms of Disturbance that Impact Fish and Wildlife Populations and Water Quality-Limited Streams.

The ultimate goal is to establish investment priorities for each of the 15 Oregon Plan reporting basins in the state using information from subbasin planning and recovery planning and the principles developed for the Board. As discussed in previous meetings, these priorities will help focus the review of grant applications for restoration projects and assist in informing funding recommendations.

### **III. Status and Approach**

Staff reported on the process for developing priorities at the January 2006 Board meeting. In each basin, a local working group has been meeting and developing proposed priorities with the assistance of a consultant. Each working group has developed a list of limiting factors and has identified priorities for watershed geography, typically at the watershed (Hydrologic Unit Code or HUC 5) scale.

A final technical product has been completed for the Rogue and Willamette basins. The products include a summary report and a matrix for each basin. Each basin has developed limiting factors matrices for 5<sup>th</sup> field HUCs. The information in the matrix identifies factors that limit watershed function for each 5<sup>th</sup> field HUC. The final products for these basins vary as they have been the test basins for restoration priority development. Staff expect future limiting factor matrices to be similar in format to the Willamette Basin.

Attachment A is an example from the Willamette Basin that shows the limiting factors for nine of the watersheds in the basin. Attachment B is an example from the Rogue Basin that shows the limiting factors for the Applegate watershed. In the Rogue Basin, individual watershed information has also been summarized to the basin scale (Attachment B).

Full copies of the Willamette and Rogue Basin Restoration Priorities reports will be available at the Board meeting. Both documents are available online to review:

- Rogue Basin – [www.jeffnet.org/~bredikin](http://www.jeffnet.org/~bredikin) (62 MB, nine maps, 112 pages)
- Willamette Basin – [www.oregon.gov/OWEB](http://www.oregon.gov/OWEB) (*Willamette Watershed Council Summaries* document and full limiting factors matrix)

### **IV. Recommendation**

Staff request the Board approve the approach and content of the Rogue and Willamette basin regional restoration priorities.

#### Attachments

- A. Willamette Basin Summary Limiting Factors Matrix Example
- B. Applegate River Watershed Council Limiting Factors Matrix and Limiting Factors Priorities Table
- C. Rogue Basin Restoration Priorities

**Willamette Basin Summary Limiting Factors Matrix Example**

Watershed	Upland Precipitation Reception and Storage					Other Important Habitats		
	Vegetation Cover	Soil Erosion	Increased Sediment / Water Runoff	Altered Hydrologic Regime	Roads and Impervious Surfaces	Oak Woodland	Grasslands & Oak Savanna	Wetlands & Wet Prairie
1709001106: Lower Clackamas River	moderate impact	moderate impact	moderate impact	moderate impact	moderate impact	Yes	Yes	Yes
1709000303: Calapooia River	low impact	low impact	moderate impact	moderate impact	moderate impact	Yes	Yes	Yes
1709000301: Long Tom River	low impact	low impact	impact unknown	moderate impact	moderate impact	Yes	Yes	Yes
1709001201: Johnson Creek	moderate impact	moderate impact	high impact	moderate impact	high impact	Yes	Yes	Yes
1709000305: Marys River	moderate impact	moderate impact	moderate impact	moderate impact	moderate impact	Yes	Yes	Yes
1709000304: Oak Creek	moderate impact	moderate impact	moderate impact	moderate impact	moderate impact	Yes	Yes	Yes
1709000806: North Yamhill River	moderate impact	high impact	high impact	high impact	moderate impact	Yes	Yes	Yes
1709000603: South Santiam River	moderate impact	moderate impact	moderate impact	moderate impact	moderate impact	No	No	Yes
1709000601: Middle Santiam River	moderate impact	high impact	high impact	high impact	high impact	No	No	No

Watershed	Terrestrial / Upland Habitats						
	Habitat Fragmentation / Connectivity	Altered Disturbance Regime	Habitat Loss	Changes in Plant and Animal Species Composition	Invasive Terrestrial Species	Domestic Animal Impacts	Altered Habitat Structure
1709001106: Lower Clackamas River	high impact	high impact	high impact	high impact	high impact	moderate impact	high impact
1709000303: Calapooia River	high impact	high impact	high impact	moderate impact	high impact	moderate impact	moderate impact
1709000301: Long Tom River	high impact	high impact	high impact	high impact	high impact	moderate impact	high impact
1709001201: Johnson Creek	moderate impact	low impact	high impact	low impact	high impact	moderate impact	moderate impact
1709000305: Marys River	high impact	high impact	high impact	high impact	high impact	low impact	high impact
1709000304: Oak Creek	high impact	moderate impact	high impact	moderate impact	high impact	high impact	high impact
1709000806: North Yamhill River	moderate impact	moderate impact	high impact	high impact	high impact	moderate impact	moderate impact
1709000603: South Santiam River	high impact	high impact	high impact	moderate impact	low impact	low impact	high impact
1709000601: Middle Santiam River	moderate impact	moderate impact	moderate impact	moderate impact	low impact	low impact	moderate impact

Watershed	Riparian / Floodplain Habitats								
	Habitat Fragmentation / Connectivity	Loss of Shade / Cover	Altered Floodplain Structure	Altered Channel Structure	Altered Hydrologic / Disturbance Regime	Changes in Species Composition	Domestic Animal Impacts	Altered Habitat Structure	Invasive Species
1709001106: Lower Clackamas River	high impact	high impact	high impact	high impact	high impact	high impact	moderate impact	high impact	high impact
1709000303: Calapooia River	high impact	high impact	moderate impact	moderate impact	low impact	moderate impact	moderate impact	moderate impact	high impact
1709000301: Long Tom River	high impact	high impact	high impact	high impact	high impact	high impact	high impact	high impact	high impact
1709001201: Johnson Creek	high impact	high impact	high impact	high impact	moderate impact	moderate impact	moderate impact	moderate impact	high impact
1709000305: Marys River	high impact	moderate impact	high impact	moderate impact	high impact	moderate impact	moderate impact	moderate impact	moderate impact
1709000304: Oak Creek	high impact	high impact	high impact	high impact	moderate impact	moderate impact	moderate impact	high impact	high impact
1709000806: North Yamhill River	high impact	high impact	moderate impact	moderate impact	high impact	high impact	moderate impact	moderate impact	high impact
1709000603: South Santiam River	high impact	moderate impact	high impact	high impact	high impact	moderate impact	low impact	moderate impact	low impact
1709000601: Middle Santiam River	moderate impact	low impact	moderate impact	moderate impact	moderate impact	low impact	low impact	moderate impact	low impact



Applegate River Watershed Council Limiting Factors Matrix and Limiting Factors Priorities Table

APPLEGATE WATERSHED COUNCIL AREA Watershed Health Factors Matrix																					
GEOGRAPHIC DELINIATION	Instream Water Quality				Instream Habitat								Upland (Hydrologic Function)						RIPARIAN		
	Temperature	Chemistry	Sediment	Quantity	Wood	Gravel	Pool	Str	Complexity	Barriers	Channel Mod	Representative Stream	Wood Source	UpVegCov	Seral Stg	Fire Risk	Dvelpmit	Roads	Inv Speci	Rip Shade	Wettd
Applegate River, Lower	limit	ade	limit	mod	ade	ade	mod	ade		mod	limit	Applegate River, Lower	limit	ade	limit	limit	mod	limit	nd	ade	nd
Applegate River, Middle	limit	ade	limit	mod	limit	ade	ade	limit		ade	limit	Applegate River, Middle	limit	ade	limit	limit	mod	limit	nd	ade	nd
Applegate River, Upper	limit	ade	ade	mod	limit	ade	ade	mod		limit	limit	Applegate River, Upper	mod	ade	limit	limit	ade	limit	nd	mod	nd
Carberry Creek	ade	ade	limit	mod	mod	limit	mod	limit		ade	limit	Carberry Creek	limit	ade	limit	limit	ade	limit	nd	ade	nd
Cheney Creek	ade	ade	mod	limit	limit	ade	ade	ade		limit	ade	Cheney Creek	mod	ade	limit	limit	mod	limit	nd	ade	nd
Forest Creek	limit	limit	limit	limit	limit	ade	ade	limit		ade	limit	Forest Creek	limit	ade	limit	limit	ade	limit	nd	mod	nd
Little Applegate River	limit	ade	limit	limit	limit	ade	ade	limit		limit	limit	Little Applegate River	mod	ade	limit	limit	ade	mod	nd	mod	nd
Murphy Creek	mod	ade	ade	limit	limit	ade	ade	limit		mod	limit	Murphy Creek	mod	ade	limit	limit	mod	limit	nd	ade	nd
Slate Creek	limit	mod	limit	limit	limit	ade	ade	mod		limit	ade	Slate Creek	mod	ade	limit	limit	ade	limit	nd	mod	nd
Thompson Creek	limit	limit	mod	limit	limit	ade	ade	limit		mod	limit	Thompson Creek	mod	ade	limit	limit	mod	limit	nd	ade	nd
Williams Creek	limit	limit	mod	limit	limit	ade	ade	mod		mod	limit	Williams Creek	mod	ade	limit	limit	mod	limit	nd	ade	nd

Limiting (limit): the watershed health factor is unhealthy and a significant amount of restoration activities are needed to improve watershed conditions.  
 Moderate (mod): the watershed health factor is lower than desired and moderate to significant levels of restoration activities are needed to improve existing conditions.  
 Adequate (ade): the watershed health factor is robust and minimal restoration activities are needed to maintain existing condition.

LIMITING FACTORS PRIORITIES TABLE							
Representative stream	Aquatic Priorities			Terrestrial Priorities			
	One	Two	Three	Representative stream	One	Two	Three
Applegate River, Lower	Temperature,Sediment	Modification	Quan,Pool Riffle Ratio,Barr	Applegate River, Lower	Rds,Riparian Shade	Seral Stage, Fire	Wood S
Applegate River, Middle	Temperature,Wood Source	Sed,Stream Complexity,Mod	Water Quan	Applegate River, Middle	Rds,Riparian Shade	Seral Stage, Fire	Wood S
Applegate River, Upper	Temp,Wood Source,Barrier	Modification	Water Quan,Comp	Applegate River, Upper	Rds,Riparian Shade	Seral Stage, Fire	
Carberry Creek	Sediment,Gravel,	Strm Complexity,Mod,Wtr Quan	Wood Source,Pool Riffle Ratio	Carberry Creek	Rds,Riparian Shade	Seral Stage, Fire	Wood S
Cheney Creek	Water Quantity	Wood	Sediment,Barrier	Cheney Creek	Rds,Riparian Shade	Seral Stage, Fire	
Forest Creek	Temp,Chem,Sed,Water Qual,Wood	Stream Complexity,Mod		Forest Creek	Rds,Riparian Shade	Seral Stage, Fire	Wood S
Little Applegate River	Sed,Temp,Water Quan,Wood Source	Stream Complexity,Barr	Modification	Little Applegate River	Rds,Riparian Shade	Seral Stage, Fire	
Murphy Creek	Water Quantity	Wood,Stream Complexity,Mod	Temperature,Barrier	Murphy Creek	Rds,Riparian Shade	Seral Stage, Fire	
Slate Creek	Temp,Wood,Barr,Water Quan	Sediment	Chem,Stream Complexity,Mod	Slate Creek	Rds,Riparian Shade	Seral Stage, Fire	
Thompson Creek	Temp,Chem,Water Quantity	Wood,Stream Complexity,Mod	Sediment,Barrier	Thompson Creek	Rds,Riparian Shade	Seral Stage, Fire	
Williams Creek	Temp,Chem,Water Quantity	Wood Source,Modification	Sed,Stream Complexity,Barr	Williams Creek	Rds,Riparian Shade	Seral Stage, Fire	
<b>WCA Summary</b>	<b>Temp, Sed, Wood, Water Quantity</b>	<b>Modification, Stream Complexity</b>	<b>Grav, Barr, Chem, Pool Riffle Ratio</b>	<b>WCA Summary</b>	<b>Rds,Riparian Shade</b>	<b>Seral Stage, Fire</b>	<b>Wood S</b>

## Rogue Basin Restoration Priorities

### Watershed Council Area's Terrestrial Priorities Summaries

<b>Watershed Council Area's Terrestrial Priorities Summaries</b>			
	<b>One</b>	<b>Two</b>	<b>Three</b>
Applegate River			
	Seral Stage, Fire Risk	Roads, Shade	Wood Source
Bear Creek			
	Seral Stage, Fire Risk, Wood Source	Development, Shade	
Illinois Valley			
	Seral Stage, Fire Risk, Roads	Wood Source, Shade	
Lower Rogue			
	Seral Stage, Roads	Wood Source	
Little Butte Creek			
	Roads, Seral Stage,	Fire Risk, Wood Source	
Middle Rogue			
	Fire Risk, Roads, Seral Stage	Wood Source, Development	
Seven Basins			
	Fire Risk, Roads, Seral Stage	Wood Source, Development	
Upper Rogue			
	Fire Risk, Roads, Seral Stage	Wood Source, Shade	

## Rogue Basin Restoration Priorities

### Watershed Council Area's Aquatic Priorities Summaries

Watershed Council Area's Aquatic Priorities Summaries			
WCA	One	Two	Three
Applegate River			
	Temperature, Sediment, Large Wood, Water Quantity	Channel Modification, Stream Complexity	Gravel, Barriers, Chemistry, Pool/Riffle
Bear Creek			
	Temperature, Chemistry, Large Wood, Water Quantity, Channel Modification	Sediment, Stream Complexity, Barriers	Gravel, Pool/Riffle
Illinois Valley			
	Temperature, Sediment, Large Wood, Water Quantity	Channel Modification, Stream Complexity, Barriers	Chemistry, Pool/Riffle
Lower Rogue			
	Temperature, Water Quantity	Chemistry, Stream Complexity, Sediment, Large Wood	Channel Modification
Little Butte Creek			
	Temperature, Sediment, Chemistry, Water Quantity	Channel Modification, Stream Complexity, Pool/Riffle, Large Wood	Gravel, Barriers
Middle Rogue			
	Temperature, Water Quantity,	Channel Modification, Stream Complexity, Sediment, Large Wood	Gravel, Barriers, Chemistry
Seven Basins			
	Temperature, Water Quantity	Channel Modification, Stream Complexity, Sediment, Large Wood, Pool/Riffle	Gravel, Barriers, Chemistry
Upper Rogue			
	Temperature, Water Quantity, Barriers	Channel Modification, Stream Complexity, Sediment, Pool/Riffle, Large Wood	Gravel