

August 25, 2003

MEMORANDUM

TO: Oregon Watershed Enhancement Board

FROM: Ken Bierly, Deputy Director

**SUBJECT: Agenda Item J: Restoration and Acquisition Priorities
September 10-11, 2003 OWEB Board Meeting**

I. Background

The Board has identified the development of funding priorities as a significant need for project review and evaluation in OWEB's grant program. Statutory guidance to the Board directs that OWEB: *"shall establish statewide and regional priorities that shall become the basis for funding decisions by the Board."* [ORS 541.371(c)] The regional approach developed for the biennial report is based on "basins" or major hydrological divisions in the state. In September 2002, the Board authorized staff to contract for the facilitation of efforts to develop restoration priorities in two pilot basins and to develop data to support statewide acquisition priorities. Paul Hoobyar of Watershed Initiatives, LLP was selected to develop restoration priorities for two "pilot" regions – the Lower Columbia and Hood basins. Pam Wiley was chosen to lead the effort to identify state acquisition priority characteristics.

II. Regional Restoration Priorities

Since the last report to the Board by Paul Hoobyar, a facilitated effort with stakeholders has developed a framework for considering regional priorities based on watershed assessments and other local and regional evaluations of environmental conditions. (Attachment A) There is broad consensus amongst OWEB's stakeholders about the validity of the framework. The framework and a draft prioritization scheme were recently presented at workshops in the two pilot regions. The resulting feedback validated the framework, and stakeholders accepted the basin-scale for setting priorities.

The effort to identify basin priorities from the framework has proven to be more challenging. The team has developed a matrix approach that has required re-evaluation of the "project types" generally identified by staff in OWEB grant application materials. The development of some logical structure for the project types is in progress and will help to categorize priority actions. Paul Hoobyar will be at the Board meeting to update the Board and provide an example of the prioritization efforts in each pilot basin.

As the consultant team has been developing the framework to identify basin-scale priorities for watershed restoration, several policy questions have surfaced that are directly related to project direction. Among the most important of these are the following:

1. *The proposed framework is based on landscape ecological principles. Does this framework make “sense” to the Board?*
2. *The regional or basin-scale priorities are proposed to be developed from smaller spatial scale (watershed) priorities. Does this process respect both the watershed scale commitment and the basin-scale need for priorities?*
3. *Does this approach provide sufficient clarity and direction to assist grant applicants and reviewers to identify priorities?*

III. Acquisition Priorities

Since Pam Wiley last briefed the Board in May, an advisory group has been convened, and a set of principles to guide discussion about data to underlie the priority-setting effort has been developed. (Attachment B) The first meeting of the advisory group reviewed the principles, developed consensus, and identified a series of policy questions for consideration. The policy issues have been shared with the OWEB Board Grant Program subcommittee. The approach suggests, in a broad sense, the kinds of ecological criteria that will be useful for evaluating applications for land acquisition. The advisory group will next review the criteria with regional “experts” to determine how broad or narrow the effects of the criteria are. As criteria are finalized, the land acquisition administrative rules will be reviewed to incorporate the priority criteria developed. Pam Wiley will be available at the Board meeting to update the Board on the progress of this effort.

As the committee has begun grappling with the question of how to identify attributes of priority land acquisition projects at the basin level, several policy questions have surfaced that are directly related to project direction. Among the most important of these are the following:

1. *What overarching philosophy or strategy should form the basis for OWEB’s acquisition priorities? One approach is to focus on specific, individual habitat types and species – primarily those determined to be in decline, at risk of further decline and not otherwise protected – as the basis for priority acquisition attributes in each basin (e.g., a project would be considered a sound investment if it addressed these habitat types/species of concern, in addition to meeting other OWEB grant criteria).*

A slightly different approach might focus on the most important systems in each basin – e.g. riparian systems, wetlands, floodplains, etc., using species only as one way of characterizing the benefits of acquiring lands associated with such systems. Which is more appropriate for OWEB, and most consistent with its mission and authority?

2. *As a result of Measure 66, the State Constitution clearly directs that lottery proceeds be used to finance “restoration and protection” of “native salmonid populations, watersheds, fish and wildlife habitats and water quality.” In addition, OWEB has a general statutory charge to base its priorities on “the Oregon Plan and on measurable goals.” Does OWEB wish to strike an explicit balance between aquatic and terrestrial systems, habitats and species in its acquisition program?*
3. *The watershed resources of primary concern to OWEB are native fish and wildlife habitat, water quality, and water quantity (flows). Does OWEB wish to consider the biodiversity attributes of a site as co-equal to these concerns in the setting of acquisition priorities?*

IV. January 2004 Board Meeting

Both consultants will have final products distributed prior to the January 2004 Board meeting. They will be on the January 2004 Board meeting agenda to make final presentations and to engage the Board in a discussion of their processes and outcomes.

Attachments

- A. Basin-Scale Priority Framework (Draft)
- B. Statewide Land Acquisition Priority Principles

(DRAFT)
OWEB Regional Restoration Priorities
Project Prioritization Framework Version 2.5

ORS 541.371 (1)(c) states that the OWEB board "shall establish statewide and regional 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."

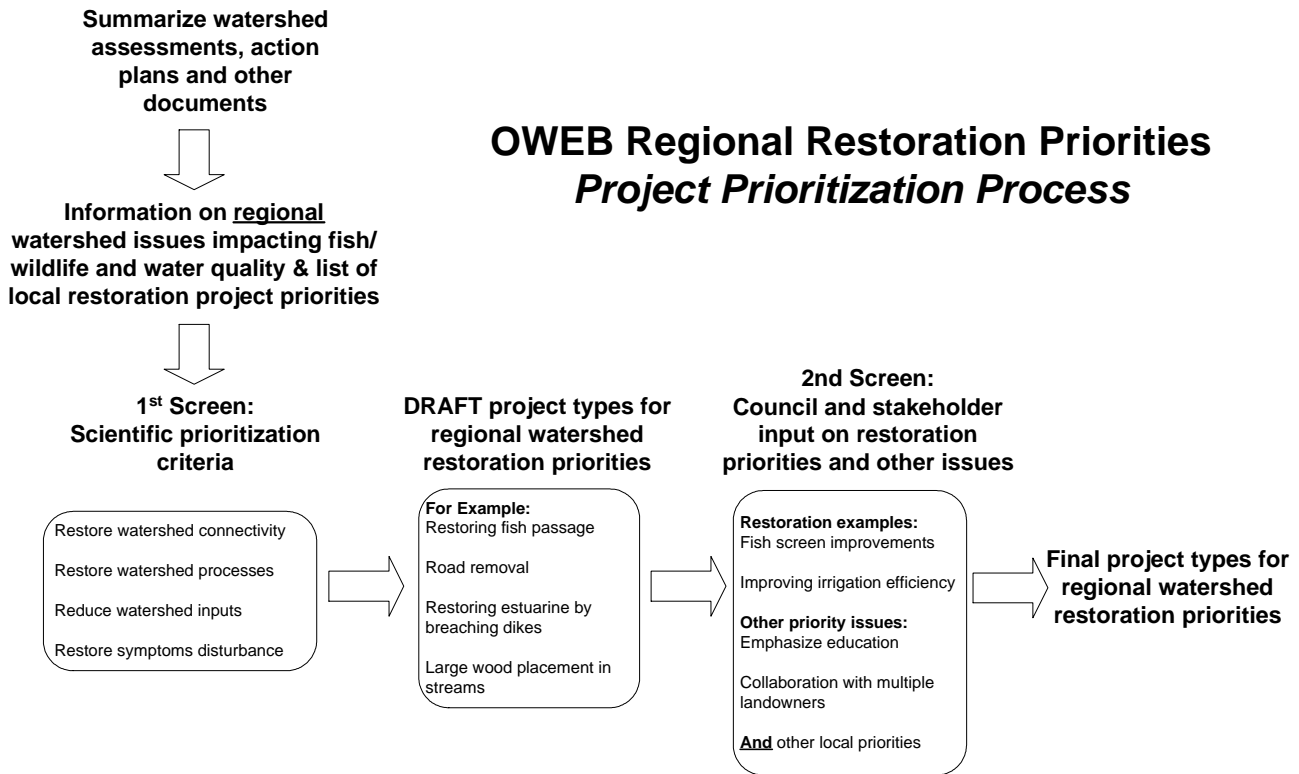
Background

The OWEB mission of *restoring, maintaining, and enhancing watersheds* implicitly recognizes that specific goals for restoration will vary between watersheds. The goal of this effort is to create a scientifically-based process that incorporates local priorities for identifying and documenting regional watershed restoration project priorities. The regional areas are defined as the 15 basins (Figure 1) identified by OWEB (similar to 3rd field HUCs). Information from local watershed assessments, action plans, other local studies, and input from local Watershed Councils and other stakeholders has been used to help develop project priorities (Figure 2). This process is also based on a scientific framework that reflects a consensus within the conservation biology field (see below) and uses watershed-specific information and local stakeholder input to develop watershed restoration priorities for each of the OWEB regions. The final product is a list of priority watershed restoration actions for each region. To provide statewide consistency, the project descriptions will be derived from the OWEB *Restoration Project Types* inventory. OWEB's staff understands that the current inventory is not inclusive of all project types and could be improved under a different organizational structure. Hence, the staff is currently reviewing the inventory, and a new Project Type inventory will be created. These project descriptions, which describe actions needed to address key factors impacting watershed conditions, will help guide local restoration planning and regional funding decisions.

Figure 1.
Oregon Plan
Basins



Figure 2. Scientific information from watershed assessments, action plans, and other documents and local stakeholder input is used to develop regional restoration priorities.



The Scientific Criteria for Prioritizing Watershed Restoration Priorities

Watershed assessments and other watershed-based studies have been summarized to provide information on the condition of watersheds within the regions. Watershed assessments provide a framework for understanding the physical and biological context of the watershed and identifying locations where habitats have been lost and watershed processes have been disrupted. This information provided the framework for selecting actions that address key habitats and watershed processes that limit fish / wildlife populations and water quality.

Most conservation biology literature encourages conserving high quality fish and wildlife habitats and key watershed processes. Protection of functioning habitats and watershed processes should take priority over habitat restoration because it is easier, less expensive, and ultimately more successful to maintain high-quality habitats than to try and recreate or restore degraded habitats (Beechie et al. 2003, Bilby et al. 2003, Roni et al. 2002).

The protection of functioning habitats is an important goal, and should work in concert with restoration actions; *however, this project concentrates on identifying watershed restoration project priorities and not*

habitat protection actions. A separate and concurrent OWEB project designed to identify habitat protection priorities (“OWEB Land Acquisition Pilot”) has been initiated. This prioritization project complements the identification of habitat protection actions developed through the *Land Acquisition Pilot* by providing a framework for identifying regional watershed restoration priorities.

Various approaches for restoring watersheds exist. While knowledge about the range of restoration techniques is incomplete, a growing consensus within the scientific community supports focusing actions initially on techniques that have a high probability of success, low variability among projects, and relatively quick response time before other techniques or projects are attempted. As a result, we suggest focusing initially on two key areas for restoration as the important initial steps: 1) *Restoration of habitat connectivity* and; 2) *Restoration of key watershed processes* (Roni et al. 2002).

Reconnecting isolated habitats that are still highly functional helps reestablish the movement of fish and wildlife species across the landscape through all of their life stages. Such “habitat connectivity” directly affects the productivity of fish populations and the aquatic system (Roni et al. 2002). Watershed processes include the natural delivery and movement of water, wood, and sediment into and through the aquatic system. These processes create the complex array of habitat types to which fish and wildlife species have adapted (Naiman et al. 1992). Focusing on restoring watershed processes, including reestablishing natural disturbance regimes, accounts for natural environmental variation, differences in habitat requirements among species, or changes in habitat needs over a species’ life cycle (Bilby et al. 2003). Such an approach does not emphasize restoring fixed habitat standards.

In concert with actions that emphasize restoring habitat connectivity and watershed processes, addressing symptoms of impaired watershed processes that impact fish habitat or water quality, or key wildlife concerns, is also appropriate. Addressing such symptoms of disturbance can help provide important habitats while watershed processes are recovering. Many decades may be needed, for example, to restore large wood delivery to stream channels at appropriate levels in order to provide quality habitats. In the short-term, habitat quality can be improved by placing wood in stream channels to improve pool complexity and accelerate other processes such as capturing and retaining spawning gravels, leaf litter and other nutrients. Such actions are particularly effective when completed along with restoration of watershed processes, such as restoring riparian areas for forest canopy and large wood recruitment.

Maintaining or modifying upland vegetation to improve soil stability and the interception and infiltration of precipitation also has the potential to affect water storage in the soil, and delivery to streams. Soil stability is a key factor in the function of upland ecosystems. Soils in upland areas provide the foundation on which many other processes depend. Symptoms of soil disturbance are invasive plant species, excessive soil loss (rills, gullies, pedestals), soil compaction, and loss of potential vegetation or functional plant groups. Encouraging management practices that focus on protecting and maintaining soil integrity through minimizing disturbance and erosion will help restore upland systems. These practices include but are not limited to rotational grazing systems, conservation tillage, conservation irrigation techniques, maintaining continuous plant cover, and selective timber harvesting (as opposed to clearcut techniques). Addressing the symptoms of soil disturbance is also appropriate and may include methods such as weed control (using biocontrol, careful application of herbicides, or manual removal), planting native vegetation to minimize exposed soil, planting windbreaks, and planting native vegetation along waterways.

The selection of projects and priorities is dependent on the scale of discussion. At the project scale, focus is on design and other tactical considerations. At a watershed scale, the focus is on the processes (sediment transport, organic material transport, precipitation interception, storage and delivery to streams,

etc.) that are affected by current land uses. At the basin scale, restoration priorities are established, using this prioritization process. Figure 3 illustrates the spatial relationships between basins, watersheds and sites.

The Process for Establishing Watershed Restoration Priorities

Building on this scientific framework, the criteria for identifying regional watershed restoration project priorities are separated into four tiers in order of priority:

- A. Actions that restore habitat connectivity.
- B. Actions that address impaired watershed processes that affect the aquatic system or water quality.
- C. Actions that reduce human impacts and inputs to the watershed.
- D. Actions that address symptoms of impaired watershed processes (e.g., placing large wood in streams) that impact fish habitat or water quality, and affect key wildlife concerns.

Project priorities have been adopted by administrative rule by the Oregon Watershed Enhancement Board to provide guidance to applicants on the types of project activities that will receive preference for funding. This framework for identifying priority projects incorporates the project types addressed in the Oregon Administrative Rules (OARs 695-020-0045-1,2,3,4).

Watershed assessments and local stakeholder input, through a series of meetings and exchanges of multiple drafts, have been used to develop regional watershed restoration project action priorities. The criteria, in concert with stakeholder input, will help rank the projects in order of general priority (Tier A, B, C, or D). The tables below provide a description of each of the criteria and project examples. Project actions for each of the respective basins in this pilot project are also identified in the Appendix.

Figure 3: Spatial Framework for Identifying Restoration Priorities

Basin Level

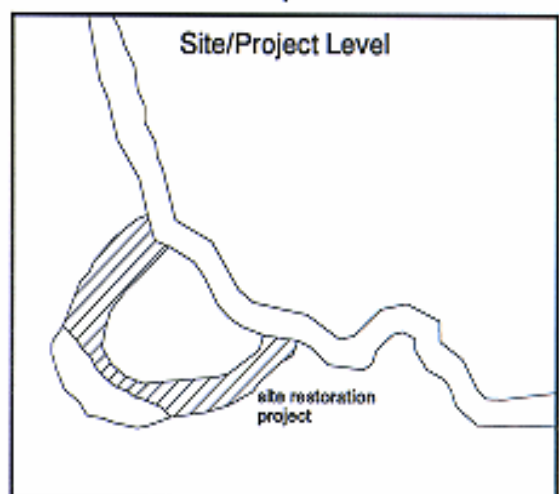
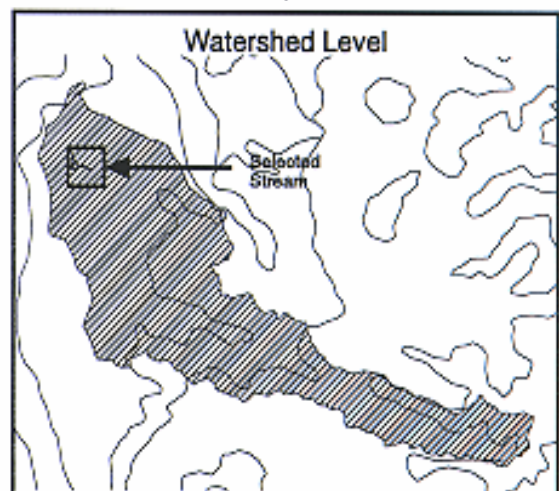
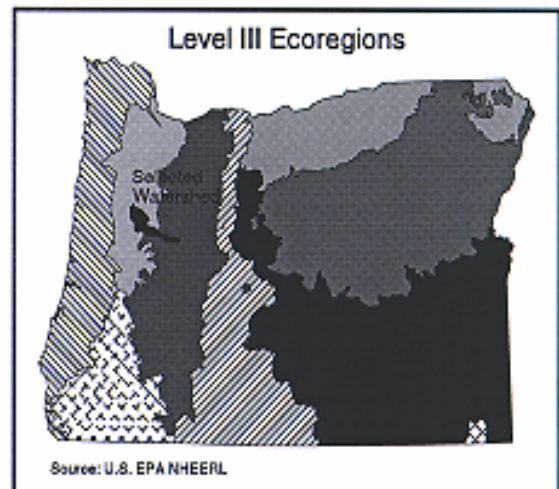
- Similar to third field HUC and ESU identification
- Spatial scale for reporting restoration activities
- Similar scale for subbasin planning
- Restoration priorities established at this scale

Watershed Level

- Watershed assessment identifies priorities
- Community-based, local leadership by watershed councils, cities, or counties
- Current, historic, desired future conditions, based on benefit-cost analysis, guide planning
- Problem-solving and need-centered priorities
- Product: Action plan—network of priority sites for watershed restoration
- Implementation: voluntary through watershed councils, cities, counties

Project Site Level

- Projects selected based on watershed priorities and willing landowners
- Willing public and private landowners plan and carry out projects with technical assistance
- Aquatic Habitat Restoration and Enhancement Guide assists design
- Monitoring and evaluation conducted to ensure implementation and effectiveness



Restorations projects shall address the following technical considerations:

TIER A	
<i>Restore watershed connectivity limiting key fish and wildlife populations</i>	
Rational	Restoring access to portions of the watershed with quality habitat is the appropriate initial strategy for the long-term improvement of watershed health. This approach provides access to suitable habitats for native aquatic species because it restores such connectivity. These types of projects are a priority because they have a high probability of success in a short time frame with relatively low cost and risk of failure. (OAR 695-020-0045-3 a & b)
Project Examples	<ul style="list-style-type: none"> ◆ Restoring fish passage by addressing road-crossing barriers ◆ Restoring natural stream flows through improved irrigation efficiency projects ◆ Developing alternatives to push-up dams ◆ Restoring connectivity between the aquatic system and the floodplain
TIER B	
<i>Restore watershed processes impacting the aquatic system, water quality-limited streams, and wildlife habitat</i>	
Rational	In the long term it is important to address the causes of habitat degradation as a higher priority than restoring symptoms of disturbance. Restoring watershed processes that form, connect, and sustain habitats and water quality supports improving the long-term health of a watershed. Key watershed processes include the delivery and movement of sediment, wood, water, and nutrients to the aquatic system. However restoring watershed processes often has a delayed response time. (OAR 695-020-0045-3 a, b & c)
Project Examples	<ul style="list-style-type: none"> ◆ Controlling sediment delivery to stream channels from roads and other sources ◆ Riparian planting ◆ Removal of rip-rap along banks
TIER C	
<i>Reduce or eliminate human impacts and inputs Into watersheds from land use activities in the basin</i>	
Rational	The working landscapes of Oregon are managed by many people for different purposes. Many land management choices have different watershed impacts. Activities that reduce or eliminate human inputs (water, nutrients, sediment, pesticides, etc.) to the watershed are important for maintaining watershed ecological functions. These types of projects address the effects of human use of the landscape on watershed functions. (OAR 695-020-0045-3 a & b)
Project Examples	<ul style="list-style-type: none"> ◆ Pesticide use alternatives (e.g. Integrated Pest Management, changes in application methods, etc.) ◆ Irrigation water use efficiency with instream flow protection ◆ Conservation tillage to eliminate sheet and rill erosion ◆ Irrigation water reuse to eliminate discharges ◆ Restoration of streams impacted by winter cattle feeding areas where cattle are managed to protect the riparian area ◆ Construction of bioswales in urban areas

TIER D

Restore the symptoms of disturbance that impact fish and wildlife populations and water quality-limited streams

Rational

Addressing the symptoms of human-related disturbance can help provide important habitats while key watershed processes are recovering. Many functions that create habitat operate at very long time scales. Many decades may be needed, for example, before large wood delivery to stream channels can be restored to appropriate levels to provide quality aquatic habitats. In the short-term, habitat quality can be improved by placing wood in stream channels to improve pool complexity and accelerate other processes such as capturing and retaining spawning gravels.

Symptoms of human-related disturbance, for example, can include elevated levels of fine sediments, the lack of large wood in the stream from poor riparian conditions, altered peak flows, and confined stream channels from bank alteration.

Project Examples

- ◆ Placing large wood in streams
- ◆ Creating natural channel and bank structure in an altered section of stream
- ◆ Installing water / sediment control basins

Using this framework to establish project priorities should not be interpreted, however, to mean that a “one size fits all” approach is appropriate, or encouraged. On the contrary. Different high priority projects should be identified in different ecological regions, and in areas with differing land use patterns. For example, in the pilot project area, the project actions identified as “high priority” in the shrub-steppe habitats of the eastern Hood Basin are quite different from the high priority project actions identified in the lower, wetter, elevation areas of the Lower Columbia Basin. Such regional differences should be anticipated, assuming OWEB uses this process for establishing regional priorities.

Other Criteria Used for Prioritizing Watershed Restoration Projects

In addition to the scientific criteria for prioritizing restoration projects, OWEB weighs other watershed issues and local considerations in the selection process and funding of restoration projects. Watershed-specific, socio-economic, and other factors are evaluated through OWEB's regional review of grant applications.

In addition to seeking local advice on restoration project types based on the scientific criteria, the prioritization process solicited input on other factors that influence the evaluation of watershed restoration project priorities. The series of meetings with stakeholders provided input on local issues influencing the selection of restoration project types, including watershed-specific, socio-economic, and other issues used to modify the selection of regional restoration priorities. The tables below list some of the possible issues that can modify restoration priorities.

Watershed-specific considerations:

Socio-economic and other local stakeholder considerations

Provide a range of habitat development times in response to restoration actions so that there is a mix of ecosystem responses – rapid and delayed

Rational A range of strategies to restore watershed processes and habitats will produce a range of times to achieve the desired response. Rapid habitat responses (1-5 years) are achieved through projects such as restoring fish passage and stream flow. Actions such as wetland restoration and riparian enhancement often operate at much slower rates (5-100 years). It is appropriate to provide a mix of restoration strategies, each with different response times because fish and wildlife species have adapted to a range of habitat conditions and disturbance patterns.

- Project Examples**
- ◆ Replacing road culverts to improve fish passage (rapid response) combined with upstream riparian restoration (delayed response) to improve aquatic habitat
 - ◆ Improving road drainage patterns (rapid response) to minimize sediment delivery combined with wetland restoration (delayed response) for sediment capture, delayed water release and habitat improvement

Consider the phasing and location of projects

Rational Processes that form and sustain habitats work together. Upslope areas are connected to stream channels and the formation of aquatic habitat. Projects should address these connections by focusing on upslope and upstream restoration actions before focusing on down slope and downstream actions. (OAR 695-020-0045-3e)

- Project Examples**
- ◆ Enhancing stream flows before restoring in-stream habitats
 - ◆ Reducing sediment delivery to streams before placing large wood in the channel

Conserve and restore a mix of habitat types

Rational Fish and wildlife are adapted to diverse habitats. Conserving and restoring a diverse array of habitat types, watershed processes, and connections between habitat fragments, supports the entire life history needs of fish and wildlife. Fish species, for example, may use one part of the watershed for spawning, such as headwater streams, and another part of the watershed for rearing, such as estuaries.

- Project Examples**
- ◆ Restoring upslope vegetation
 - ◆ Conserving riparian habitats
 - ◆ Restoring in-stream habitats
 - ◆ Enhancing wetlands / estuaries

Promote collaboration	
Rational	Voluntary local partnerships between watershed residents and others are critical for making improvements to watersheds on private lands and in local communities. Projects with direct evidence of collaboration between stakeholders and agencies will generally be given preference over single-party projects. (OAR 695-020-0045-3d)
Project Examples	<ul style="list-style-type: none"> ◆ Multiple landowners and agencies collaborating to restore fish passage barriers ◆ Schools, industry, and the local watershed council cooperating on a watershed educational project.
Promote education	
Rational	Education and outreach are essential for providing watershed residents and others with the knowledge they need to make wise choices to conserve and restore the health of their watersheds. Watershed and riparian education projects that provide peer education about watershed processes for landowners will be given priority over creation of new curriculum materials. (OAR 695-020-0045-3f) (Note: Every local watershed group with which the consultant team met within the pilot project area considered education a high priority, both as a component of restoration projects, as well as general outreach and education to the broader community).
Project Examples	<ul style="list-style-type: none"> ◆ The development of outreach materials and demonstration projects emphasizing the proper restoration of riparian and flood plain habitats
Restore a mix of land use types	
Rational	Restoring a mix of habitat types requires working on a range of land uses that have altered the variety of historical habitats: for example lowland and wetland habitats that often include urban land uses; and upland areas in agricultural, forestry, and other land uses.
Project Examples	<ul style="list-style-type: none"> ◆ Restoration of urban riparian lands ◆ Restoration of wetlands on agricultural lands

References

Bechie, T.J., G. Pess, E. Beamer, G. Lucchetti, and R.E. Bilby. 2003. Role of watershed assessments in recovery planning for salmon. In D.R. Montgomery, S. Bolton, D.B. Booth, and L. Wall (eds.) Restoration of Puget Sound Rivers. University of Washington Press, Seattle, WA.

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Naiman, R.J., T.J. Beechie, L.E. Benda, D.R. Berg, P.A. Bission, L.H. MacDonald, M.D. O’Connor, P.L. Olson, and E.A. Steel. 1992. Fundamental elements of ecologically healthy watersheds in the Pacific Northwest coastal ecoregion. In R.J. Naiman (ed.) Watershed Management: Balancing Sustainability and Environmental Change. Springer-Verlag, New York.

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Appendix

Watershed Restoration Priorities

Hood Basin

Issues and Opportunities

Restoration Issues

- Channel Modifications – roads, historic splash damming & LWD removal
- Irrigation diversions create low summer flows and dewater some reaches (Hood, Fifteenmile, Mosier)
- Irrigation systems/interbasin transfer of glacial, silt-laden water to clear streams (Hood River)
- Fish Passage Barriers due to Roads and dams, including Clear Branch Dam
- Loss of aquatic habitat complexity: Channelization and limited in-channel wood
- Water quality concerns, temperature, nutrients, sediment, pesticides
- Retain water and soil in upland areas (Fifteenmile Creek)
- In stream sedimentation (Fifteenmile Creek)
- Falling groundwater levels (Mosier Valley)
- Pesticide contamination from orchards and other land uses (Hood & The Dalles)

Key Restoration Opportunities

- Restore / improve fish passage at road crossings, irrigation diversions and dams.
- Restore instream flows, increase irrigation efficiency or water leasing
- Reduce contaminants to meet water quality guidelines
- Improve stream complexity
- Restore riparian conditions for habitat and aquatic shade
- Create ongoing education and awareness projects on watershed issues and projects
- Encourage conversion to no-till or perennial crops (Fifteenmile Creek)
- Support city, county and federal noxious weed control efforts.
- Promote ecologically sound range management to improve vegetative cover in grasslands and reduce grazing pressure on riparian areas (Fifteenmile, The Dalles)

Watershed Restoration Priorities

Lower Columbia Basin

Issues and Opportunities

Restoration Issues

- Extensive loss of historic estuarine and wetland habitats in Columbia River and tributary systems
- The lower Columbia estuary contains important habitats for fish runs throughout the Columbia River Basin
- Wild coho salmon populations, particularly in the Sandy Subbasin
- Fall Chinook populations, particularly in the Sandy Subbasin
- Extensive fish passage barriers, including hatcheries and dams
- Loss of aquatic habitat complexity from channelization and limited in-channel wood
- Water quality concerns, particularly temperature and road-related sedimentation

Key Restoration Opportunities

- Improve connectivity and productivity of estuarine, diked, and lowland areas
- Restore / improve fish passage at road crossings, tide gates, dams, and dikes
- Restore riparian conditions for habitat and aquatic shade
- Improve stream complexity
- Improve instream flows, particularly in the Sandy Subbasin
- Prevent and reduce aquatic and terrestrial invasive plant and animal species
- Reduce sediment delivery from roads and developments
- Re-establish historical stream and river channels, particularly in the Lower Columbia estuary

PAM WILEY

PLANNING · PROBLEM SOLVING · FACILITATION

To: Oregon Watershed Enhancement Board
From: Pam Wiley, Land Acquisition Priorities Project Facilitator
Date: August 17, 2003
Subject: Project Status Report

Last summer, the OWEB Board approved two projects aimed at developing funding priorities, one dealing with *watershed restoration* and one with *land acquisition*. The purpose of this memo is to bring the Board up to date on the status of the land acquisition priorities project, invite comments on general project assumptions and principles, and seek the Board's advice regarding a few key policy issues related to the project.

Background

In 1998, Oregon voters approved an amendment to the state constitution directing a portion of state lottery proceeds to be used "for the public purpose of financing the restoration and protection of native salmonid populations, watersheds, fish and wildlife habitats and water quality in Oregon." The amendment provided that the money be used for a broad range of restoration and protection purposes, including "entering into agreements to obtain from willing owners determinate interests in lands and waters that protect watershed resources, including but not limited to fee simple interests in land, leases of land or conservation easements."

The constitutional amendment approved by the voters did not establish priorities for the use of the funds, and implementing statutes and administrative rules provide only general guidance on this question. The statutes direct that the designated lottery proceeds be deposited into a "restoration and protection fund" to be administered by OWEB. (ORS 541.377(4)-(5)) OWEB, in turn, is directed to "establish statewide and regional goals and priorities" as the basis for its funding decisions, to base those priorities on "the Oregon Plan and on measurable goals" and to "consider local economic and social impacts" among its criteria for evaluating projects. (ORS 541.371(c))

Any project the Board approves for funding must, among other criteria, provide a public benefit through improved water quality, fish or wildlife habitat, or public information or education on a watershed function. (ORS 541.401) With respect to acquisition projects per se, the statutes say only that OWEB may fund land and water acquisition projects for the purpose of "maintaining or restoring watersheds, habitat and native salmonids."

OWEB has adopted administrative rules setting forth the application requirements and grant conditions for acquisition proposals (OAR 695-020-0020-0060). The first substantive section of the rules, OAR-695-020-0051, specifies what kind of information and documentation is required for acquisition grant applications. Although the rules do not contain specific acquisition priorities, they do suggest the general types of projects in which OWEB is interested (emphasis added):

- OWEB has authority to fund projects that “further the goal of *protecting and/or restoring native salmonids, fish and wildlife habitat, watersheds or water quality in Oregon*”;
- Applicants must provide information describing the habitat proposed to be protected or restored, *species expected to benefit, the current status of those species, and a “description of the importance of the site’s habitat and species values at the local, ecoregional and statewide levels.”*
- Applicants must also describe the *watershed functions or water quality parameters* the project proposes to directly affect, the condition and trends of those functions and parameters, and how the project will affect this condition and trend.
- Finally, the applicant is to describe how the proposed acquisition will benefit *overall ecological health and protect or enhance biodiversity.*

Since 2000, OWEB has funded 11 land acquisition projects (of 26 applications received). Projects approved thus far focus heavily on wetland and riparian habitats. Seven of the approved projects are located in the Willamette Valley, two in the North Coast basin, and three east of the Cascades. State and local land conservancies and public agencies have proposed the majority of the projects.

To summarize, the state constitution, statutes, OWEB administrative rules and past grant-making all provide insights into the general purposes of acquisition projects – protecting and restoring important habitats and species, protecting or improving watershed function and water quality, and benefiting overall ecological health and biodiversity. They do not, however, provide guidance regarding specific resources or areas of priority to achieve those purposes. What kinds of projects will lead to the greatest improvement in watershed function or provide the greatest benefits to overall ecological health and biodiversity in specific basins? What habitats and species are most important at the local, ecoregional and statewide levels? The goal of the land acquisition priorities project is to provide OWEB with sensible, supportable answers to these questions.

Project Status

Since OWEB was last briefed on the project in June, the project advisory committee has been recruited and has held its first meeting. Background materials were developed and provided to the committee to facilitate a general discussion of project assumptions and principles and a framework or approach to identifying priorities. The framework was tested against two pilot basins, leading to refinement of the approach and identification of additional information needs.

Five additional meetings have been scheduled for the fall. Each meeting will focus on several basins, organized by OWEB region. OWEB regional staff and other regional experts will be involved in these meetings. As the priorities for each basin are drafted, additional opportunity for stakeholder input will be provided.

Following are the project assumptions and principles discussed at the first meeting of the land acquisition priorities project. The assumptions and principles will continue to be refined as the group focuses on more specific information regarding watershed and fish and wildlife issues around the state. The committee appreciates feedback from the Board at this early stage in the process.

Project Assumptions

1. Scope. OWEB is authorized by state law to acquire lands “that protect watershed resources”. Administrative rules adopted in November 2000 and May 2003 state that the OWEB Board “has the authority to fund projects to acquire an interest in land or water which, in its judgment, further the goal of protecting and/or restoring native salmonids, fish and wildlife habitat, watersheds, or water quality in Oregon.” This project will help OWEB respond to acquisition proposals and expend funds on acquisition projects in a more informed and strategic manner. *It will not address other policy issues related to land acquisitions.*
2. Resource Goals. For the purposes of land acquisitions, the “watershed resources” of primary concern to OWEB are *native fish and wildlife habitat, water quantity (flows) and biodiversity*. OWEB’s goals with respect to these resources are to:
 - Improve and maintain overall watershed health by protecting and restoring natural watershed functions and processes; and
 - Protect and/or restore native fish and wildlife habitat and biodiversity.
3. Ecological Benefits. *This project focuses only on ecological benefits*. OWEB applies many other factors when it reviews land acquisition proposals, including the capacity of the grantee to manage the property over time and strong community support. It is important to note that even projects with strong ecological benefits may not be funded if they fail to meet other criteria.
4. Reasons to Acquire Land. Land acquisition is one of many tools available to OWEB to achieve its goals of watershed and habitat protection and restoration. Acquiring interests in land, whether by fee simple or easement, can be complex and expensive and requires a long-term commitment to stewardship and management. As a result, land acquisition proposals demand careful consideration by both the project proponents and OWEB. That said, *land acquisition can be a very effective tool for improving watershed resources in specific situations by:*
 - Ensuring continued long-term management in support of specific watershed resources and/or functions; for example, when land containing critical habitat is for sale, and potential future owners could significantly affect that habitat through a change in land use or management; or
 - Allowing active, intensive management or restoration requiring most of a parcel or parcels to be dedicated to conservation to maintain or recover species and/or functions. In these situations – as contrasted with situations in

which recovery goals can be met with active restoration on only a portion of a parcel otherwise dedicated to non-conservation uses – acquisition may be the only way to address landowner needs and meet restoration goals at the same time.

5. Water Rights. *Water rights acquisition priorities already have been identified through a separate agency process.* The relationship between water and land acquisition priorities in each basin will be considered during the process.
6. Role of Threat in Identifying Priorities. *Acquisition is not merely a “defensive” conservation strategy (although it can be), but a strategy to achieve positive long-term watershed outcomes and avoid future problems.* The degree of threat, while a consideration in the project review process, should not be a threshold factor in determining acquisition priorities.
7. Project Deliverables. The desired project deliverable is a document describing *land acquisition priorities* for each major drainage basin in Oregon, *expressed as a set of project attributes or characteristics*. The report will respond to the question, “What would constitute a high priority OWEB acquisition project in this basin?”

Principles

The project advisory committee believes that OWEB’s goals are well supported, and the state’s resources effectively spent, when acquisition projects focus on areas with the following general characteristics:

1. Large, Intact Areas. Large areas, or smaller but key portions of larger landscapes, containing a diverse array of important fish and wildlife species and habitat types and relatively intact, functioning systems. Zumwalt Prairie and Whalen Island are two examples of such projects (Whalen Island, while small, is a key piece of a larger, intact system). In terms of system impact and biological richness, these kinds of projects provide a strong, per-acre return on OWEB’s investment.
2. Areas “On the Brink”. Areas where natural systems and processes are still functioning, but where a trend toward ecosystem degradation requires action to prevent conditions from “tipping” to an unrecoverable (or very difficult to recover) state. In such transition areas, acquisition and restoration of key parcels can help stabilize and reverse trends. However, OWEB should only invest in such areas when there are other significant restoration activities planned or in place, or where there is strong evidence that restoration of a key parcel can be a catalyst for broader efforts.
3. Restoring Function. Areas where restoration and active management are necessary to re-establish critical ecological functions supporting broader, landscape-scale conservation strategies. Individual parcels in these areas may be in a degraded condition but still have potential for restoration within the geographic and management context of larger conservation efforts.

4. Transition Areas. Areas or sites providing critical habitat or watershed function in areas undergoing transition from undeveloped to developed conditions. The Metolius River project is a good example of an area in transition where strategic investments in acquisition can ensure important, long-term habitat benefits.
5. Biological “Hot Spots”. Smaller areas containing aggregations of at-risk or unique species and habitat types should not be overlooked, but only where 1) the species or habitat types can be demonstrated to be viable and sustainable, and 2) the subject area connects, or is located adjacent to or within, larger protected areas containing priority species aggregations.
6. Improving Connectivity. Acquisitions that contribute to habitat connectivity by expanding or connecting areas already managed to protect watershed resources and/or functions; for example, acquiring a parcel connecting two sections of a publicly owned migratory corridor for fish or wildlife.
7. Complementing Existing Networks. Parcels or sites that complete or complement existing networks or patterns of conserved areas; for example, a project contains land with a system type significantly underrepresented in the current network of lands managed for conservation purposes.
8. Areas Crucial for Recovery. Lands identified as crucial for the recovery of listed fish and wildlife species or as acquisition priorities in the ODFW “Comprehensive Wildlife Conservation Plan” or in sub-basin plans prepared by the Northwest Power and Conservation Council.

Next Steps

The committee is in the process of refining a set of ecological criteria for identifying basin-specific attributes of priority land acquisition projects. Factors being considered include system or habitat types identified through other science-based prioritization strategies, at-risk species and habitat types, and other system or habitat types critical for watershed function in a particular basin. Issues such as whether identified types are already adequately protected through regulation, ownership or management status, or are better addressed in other basins or ecoregions are also being considered. The criteria will be refined through application to specific basins.

Issues for OWEB Board Discussion

As the committee has begun grappling with the question of how to identify attributes of priority land acquisition projects at the basin level, several policy questions have surfaced that are directly related to project direction. Among the most important of these are the following:

1. Project Assumptions. The “project assumptions” section of this memo suggests several parameters for the discussion of land acquisition priorities, most notably:
 - Basin priorities will be expressed as attributes in a narrative format, rather than as areas on a map;
 - The watershed resources of primary concern to OWEB are native fish and wildlife habitat, water quantity (flows) and biodiversity. OWEB’s goals with respect to these resources are directed at the protection and restoration of these resources, as well as watershed functions and processes;

Does OWEB concur with these suggested assumptions?

2. Philosophical Approach. What overarching philosophy or strategy should form the basis for OWEB’s acquisition priorities? One approach is to focus on *specific, individual habitat types and species* – primarily those determined to be in decline, at risk of further decline and not otherwise protected – as the basis for priority acquisition attributes in each basin (e.g., a project would be considered a sound investment if it addressed these habitat types/species of concern, in addition to meeting other OWEB grant criteria).

A slightly different approach might focus on the most important *systems* in each basin – e.g. riparian systems, wetlands, floodplains, etc., using species only as one way of characterizing the benefits of acquiring lands associated with such systems.

Which approach is more appropriate for OWEB, and most consistent with its mission and authority?

3. Balancing Investments. As a result of Measure 66, the state constitution clearly directs that lottery proceeds be used to finance “restoration and protection” of “native salmonid populations, watersheds, fish and wildlife habitats and water quality”. In addition, OWEB has a general statutory charge to base its priorities on “the Oregon Plan and on measurable goals”. What kind of balance does OWEB wish to strike between aquatic and terrestrial systems, habitats and species in its acquisition program?
4. Additional Guidance. Is there additional policy guidance, or are there additional project parameters, that OWEB can provide?