



# Wetlands Update

A publication of the Oregon Division of State Lands

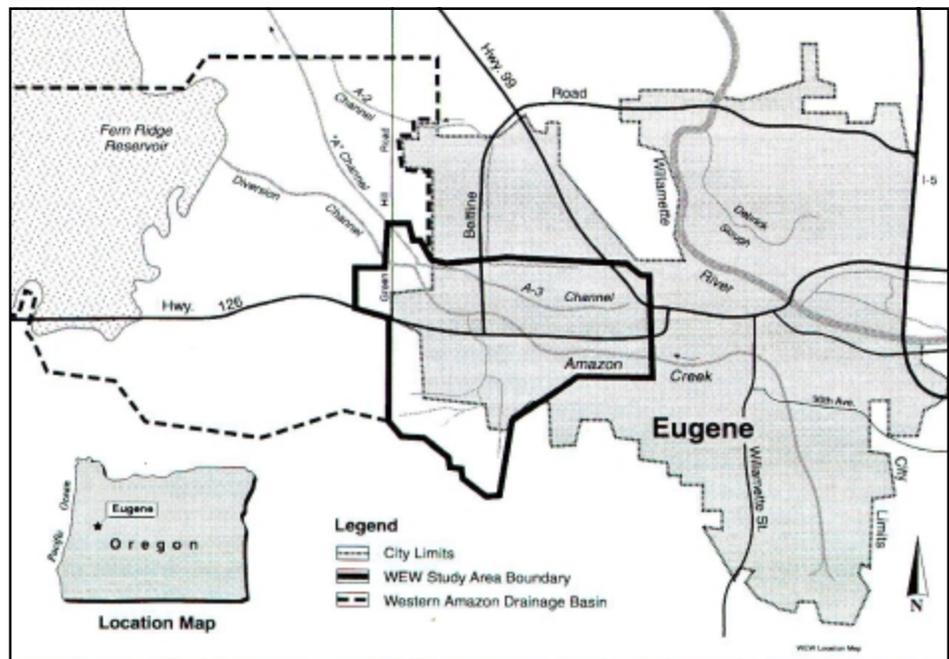
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## West Eugene Wetland Plan Continues to Benefit City and Wetland Conservation

Last fall, DSL completed a mandatory five-year review of the West Eugene Wetlands Plan (WEWP) to evaluate whether or not it continues to meet all local, state, and federal requirements and whether the plan, as implemented, meets the goals established in the plan. DSL found that the WEWP met or exceeded most goals and requirements during its first 5 years of implementation.

### First, Some History

When the City of Eugene discovered in 1987 that much of the industrial-zoned land in West Eugene was wetland, the city was thrust into a crisis. Considerable public investment in infrastructure had been made and landowners and developers were left in a highly uncertain position. Could they develop or couldn't they? At about the same time, DSL was developing wetland legislation that included a provision for cities to develop a Wetland Conservation Plan (WCP). A WCP is an optional approach to Statewide Planning Goal 5 wetland protection programs—more difficult to develop but with a larger “pay-



off” in terms of both resource protection and development certainty. With hope anew, the city embarked on developing a WCP—now known as the West Eugene Wetlands Plan. Development of the West Eugene Wetland Plan (WEWP) took several years and considerable public involvement. The WEWP was adopted by the City of Eugene

Location of West Eugene Wetland Plan Area

*Continued on next page*



and Lane County in 1992 and was approved by DSL as a WCP in 1994.

The West Eugene study area lies within the Amazon Creek drainage basin. The area had been subjected to considerable hydrologic manipulation in the past, largely by federal agencies for flood control. Amazon Creek was ditched and straightened and was basically a trapezoidal channel; areas not already developed were mostly in agriculture, primarily grass seed fields and pasture. Some native wetland plant communities remained, primarily within The Nature Conservancy's Willow Creek Preserve.

### WEWP Goals

The WCP statute set specific criteria that needed to be included in plan development and implementation measures. One of the requirements is for the local government to set specific plan goals. Basic WEWP goals were to:

1. Increase wetland resource protection, with special focus on restoring aquatic systems (streams and associated wetlands), protecting and restoring Willamette Valley wet prairie, and protecting and enhancing rare plant habitat.
2. Increase confidence and certainty in the development process in West Eugene.
3. Provide a stable funding program for WEWP implementation and minimize financial impacts on private landowners of wetlands to be protected or restored.
4. Provide opportunities for recreation and public education about wetland functions and values.

### Plan Accomplishments and Benefits

As part of the state review of WCP implementation, the Lane Council of Governments prepared an implementation summary report. Plan achievements are summarized below.

#### *Resource Protection*

The primary focus of the WEWP has been to protect and restore wetlands for their multiple functions and societal values, and to secure preservation of the most valuable

wetland areas. Wetland protection is accomplished through three main mechanisms:

1. Land use designations that designate certain wetlands, or portions of wetlands, for protection or restoration
2. Zoning provisions that provide an additional level of protection, including buffers
3. Acquisition of wetlands and adjacent uplands

Resource protection elements or accomplishments include waterside and wetland zoning ordinances, a rare plant conservation strategy, a mitigation plan that focuses on restoring large wetland blocks in strategic locations, and wetland research.

Thus far, more than 1,000 acres of wetlands are designated for protection or restoration. Most of the wetland area that has been (or will be) restored was partially drained, highly degraded agricultural wetland. More than 2,200 acres have been acquired from willing sellers, including 1,400 acres of wetland. The Nature Conservancy, a WEWP partner, owns several hundred acres of wetland and upland within the plan area. The 404-acre Willow Creek Natural Area includes native Willamette Valley wet prairie and many rare plant populations, and is a focal point for wet prairie management and research.

#### *Development Certainty*

As noted above, the "discovery" that large areas of West Eugene were wetland threw the city and many landowners into a state of uncertainty and despair over development prospects. The WEWP has turned that crisis into a strength in four ways:

1. Increased awareness within the business community that wetlands can be an amenity;
2. Wetland inventory has returned certainty for landowners, who know whether or not their property contains wetlands;
3. The plan designates specific wetlands or portions of wetlands for development, and state and federal plan approval speeds permitting for those parcels; and



4. The mitigation bank program operated by the city has provided an alternative for developers to meet mitigation needs in a timely, relatively hassle-free, economic manner.

In general, confidence has been restored, predictability increased and development is strong in the plan area. As was envisioned in the plan goals, the plan has facilitated a coevolution of economic growth and wetland preservation in the West Eugene area.

### ***Collaborative Implementation***

Collaboration among numerous agencies and organizations has been an essential element of success. The Wetland Executive Team (WET), which coordinates plan implementation, includes the City of Eugene, The Nature Conservancy, the Bureau of Land Management, the Army Corps of Engineers, and the Oregon Youth Conservation Corps. Another group known as the “Wetheads,” a multi-agency team that developed the plan, continues to work on plan amendments and provides support to WET. There is also the inevitable Technical Advisory Committee and a Mitigation Bank Review Team, comprised of state and federal agency representatives. Volunteers have made significant contributions to plan implementation, as well.

A financing strategy has proven to be crucial for a successful WCP. The WEWP established funding for capital improvement projects, has lobbied successfully for Congressional appropriations for acquisition and restoration, and has coordinated funding of restoration projects through the mitigation bank program and a number of other cooperative sources. Local funding sources include stormwater user fees, sewer fund and general fund, as well as mitigation bank fees.

### ***Public Outreach, Education, and Recreation***

Wetland-related recreational and educational opportunities are a key component of the WEWP and one that generates additional support for the plan. Outreach and educational activities include: field trips; brochures; checklists of wetland plants, birds, and other critters; a newsletter; a self-guided

wetland tour book; videos; trails, boardwalks and bird viewing blinds; volunteer work parties; presentations to a wide variety of local and national groups; and a web site ([www.ci.eugene.or.us/wewetlands/](http://www.ci.eugene.or.us/wewetlands/)).

### **Plan Amendments Near Completion**

For several years, City of Eugene wetland staff and elected officials have been working on a number a plan amendments. Some of the amendments were required by DSL as a condition of plan approval and primarily address incorporation of wetlands that were mapped too late to bring into the original plan. Other amendments address needs discovered during plan implementation, such as the need to accommodate “planned utility corridors.” Once the amendments are adopted locally, they will be submitted to DSL for approval. DSL has worked closely with the city to ensure that the amendments meet state requirements. Additional opportunity for public comment will be provided during DSL’s review process. Visit the city’s wetland plan web site ([www.ci.eugene.or.us/wewetlands/](http://www.ci.eugene.or.us/wewetlands/)) for more information.

### **Wetland Planning Advantages**

The accomplishments of the WEWP illustrate the potential strength of locally based wetland planning for meeting wetland resource protection goals and resolving wetland land use conflicts. Because local comprehensive plans and zoning are usually at odds with state and federal wetland regulations, setting the stage for confusion and conflict, locally based planning that includes a detailed wetlands inventory and “up front” decisions regarding wetland sites can lead to increased certainty for landowners and fewer wetland conflicts. Just as important is the ability, through the planning process, to take a regional view of wetland location and condition, historical losses, restoration and protection goals, and multiple-objective planning and implementation. This type of regional perspective and advance planning is not possible through state and federal regulation alone. ■



# Compensatory Mitigation Study by DSL Points to Need for Improvement

by Steve Morrow, Essential Habitat Specialist

One of the tasks assigned to DSL's permit compliance team is to monitor permitted wetland impacts for compliance with state Removal-Fill Law permit requirements, including compensatory mitigation (wetland replacement) requirements. A recent study by DSL of permits issued between 1995 and 1999 showed that only 24 percent of compensatory mitigation projects could be judged a full "success" based on criteria developed to evaluate compliance with permit requirements. DSL is initiating several measures to improve compensatory mitigation success, a problem not unique to Oregon.

## Mitigation Requirements Overview

The Removal-Fill Law requires people to obtain a permit prior to placing, removing, or altering 50 cubic yards or more of material in waters of the state. In State Scenic Waterways and streams designated as Essential Indigenous Anadromous Salmonid Habitat, a permit is required for any amount of fill, removal, or other ground alteration, with limited exemptions. The permit system is designed to allow for work or activities to proceed in waters of the state while still providing the protection, conservation, and best use of the water resources of this state.

Before a permit is issued, a process known as "mitigation" is undertaken. Both state and federal wetland regulations require a sequential mitigation process that begins with avoiding—and next minimizing—wetland impacts, and finally "compensatory mitigation" for unavoidable impacts. "Compensatory mitigation" is defined in the Removal-Fill Law rules as: "Wetland resource replacement or, in limited circumstances, payment or protection in lieu of replacement for wetlands damaged or destroyed by a permitted activity." The compensatory mitigation requirement is one of the permit conditions.

Compensatory mitigation is typically undertaken in one of three ways:

1. Restoration—restoring a former wetland that has been drained or filled;
2. Creation—creating a new wetland from upland; and
3. Enhancement—improving the function and condition of a degraded wetland

Each of these three mitigation approaches has a different track record for success and overall ecological benefits. Based on these observations, DSL's mitigation rules set minimum ratios that vary by the type of compensatory mitigation proposed. The ratios reflect both the probability of mitigation project success and the state's mandate to maintain both wetland acreage and functions.

- Restoration ratio is 1:1 (1 acre restored for every 1 acre lost)
- Creation ratio is 1.5:1 (1½ acres created for every 1 acre lost)
- Enhancement ratio is 3:1 (3 acres enhanced for every 1 acre lost)
- Enhancement of cropped wetlands is 2:1 (2 acres enhanced for every 1 acre lost)

## Study Methods

DSL staff collected a total of 93 sets of data from projects conducted between 1995 and June 1999 to determine the success of the three wetland compensatory mitigation types: restoration, creation, and enhancement. A given mitigation site may include one mitigation type or more than one. Of the 93 sets, 7 were primarily restoration; 33 were primarily creation; 28 were primarily enhancement; and 25 were a combination of the wetland compensatory mitigation approaches.

Because the "success" of a wetland mitigation site can be subject to individual interpretation, monitoring staff took several



steps to reduce that variable. Criteria for success were developed and, initially, staff conducted site visits together to ensure that their interpretations and determinations were consistent between group members.

A **success** determination was made when a wetland compensatory mitigation project was completed as specified in the mitigation plan, met all of the goals and objectives as stated in the mitigation plan, and met all relevant permit conditions.

A **partial success** determination was made when the wetland compensatory mitigation was not done exactly as authorized or conditioned by the permit, or the mitigation project as built met all permit specifications but was not functioning adequately and thus did not meet all of the goals stated in the mitigation plan.

A **failure** determination was made when there was significant deviation from approved plans or a total project failure.

Factors that DSL staff assessed to determine if a project was a “partial success” or a “failure” included:

- Human disturbance—vandalism, mowing, or other unauthorized maintenance, vehicle access damage, etc.
- Hydrology—inadequate or no water, a structure intended to impound water but never built, inadequate grading to reach water table, etc.
- Weeds—invasive/nonnative plant species dominate site
- Lack of vegetative cover—typically permit conditions call for at least 80 percent coverage of wetland plant species planted in the mitigation site
- Noncompliance with permit—additional unpermitted impacts, mitigation not done, mitigation site being used for some other function (like detention pond), noncompliance with site specific conditions, etc.

## Study Results

The results of this study suggest that there are significant compliance and performance problems with the compensatory mitigation approaches under the current program, especially for creation and enhancement.

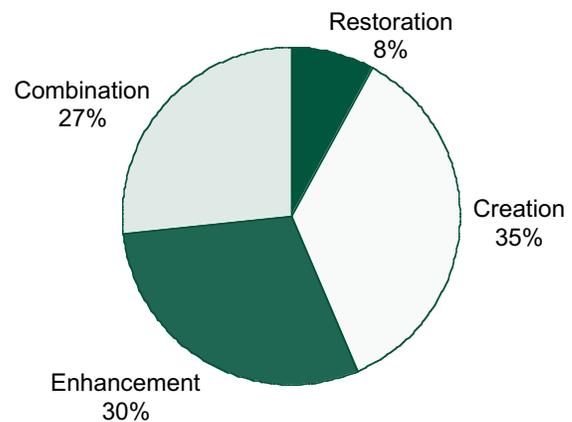
Restoration was completely successful 57 percent of the time, yet it was selected as a mitigation approach less than 8 percent of the time. This low representation is despite the fact that the mitigation

ratios favor restoration (1:1 ratio). One reason is that wetland restoration sites can be hard to find in urban settings where most mitigation is conducted. Creation was completely successful only 27 percent of the time, but was the compensatory mitigation approach used the most (36%), often because it is easiest to adapt to urban parcels. Enhancement had the poorest record of success at 14 percent but was the second-most common compensatory mitigation approach (30%), despite the higher 3:1 ratio requirement.

## What Does This Mean?

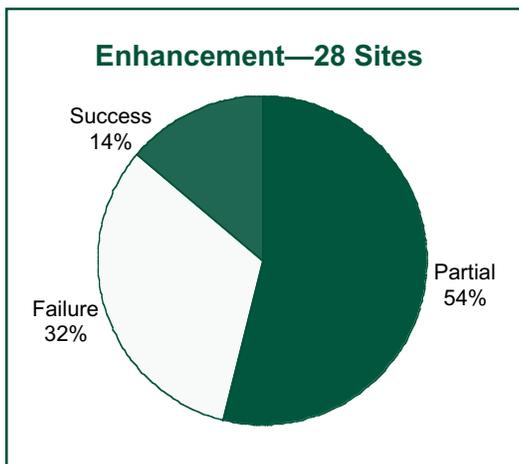
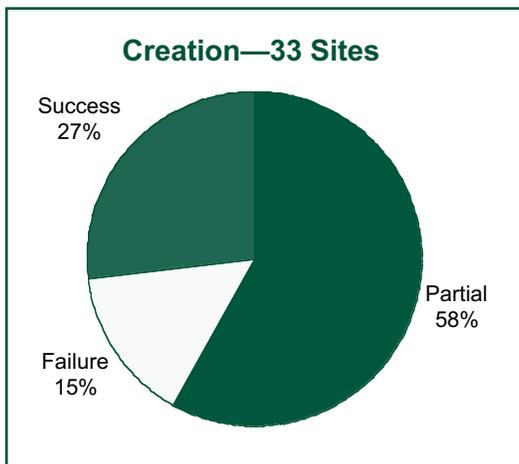
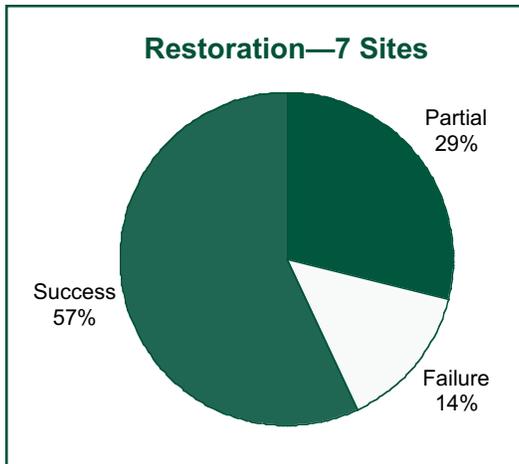
The results of this study provide another indication that the state is not meeting the goal of maintaining the state’s wetland resource base, a policy goal set in state law and one of the state’s environmental benchmarks. Previous studies of wetland permit compliance (Shaich and Franklin 1995) and compensatory mitigation project success (Kentula et al. 1992; Gwin et al. 1999) also showed that through the permit process there are losses of wetland acreage and changes in wetland types. In addition, a recent study by DSL of wetland changes in the Willamette Valley between 1982 and 1994 showed an average annual loss of 546 acres of wetland, largely due to unregulated loss—impacts that

### Percentage of Wetland Compensatory Mitigation by Type (93 data sets)



*Continued on next page*





did not require a permit or that required, but did not have, a permit (Daggett et al. 1998; *Wetlands Update* Vol. 10, Summer 1999). However, in considering the results of this study, it is important to keep in mind that DSL was primarily evaluating permit compliance and that a single shortcoming, such as less than 80 percent coverage by wetland vegetation, could result in a project being judged a “partial success.”

### How Will the Study Results Be Used?

DSL is using the results of these studies to evaluate and improve the current wetland compensatory mitigation approach and requirements. The dual goals are to (1) provide clear guidance to permit applicants and their consultants as to what constitutes an acceptable compensatory mitigation plan, and (2) ensure that compensatory mitigation projects actually “compensate” for the wet-

lands that were eliminated or altered as permitted. Although many wetland functions were not directly measured in this study, wetland functions are dependent on main-

taining wetland acreage, types, and condition in appropriate locations.

We have already taken steps to improve our procedures for tracking wetland mitigation projects to ensure that regular monitoring is taking place, as required by the permit conditions. This allows us to discover problems early on and take corrective action, as needed, well before the monitoring period ends.

One likely improvement will be to incorporate hydrogeomorphic classification at a very basic level. DSL has been developing an Oregon Wetland and Riparian Hydrogeomorphic (HGM) Assessment approach that, when completed, could allow us to measure specific functions for some wetland types. In the meantime, staff are developing an approach for quickly evaluating whether a compensatory mitigation plan will result in a change of basic wetland type—and thus a change in wetland functions—as studies indicate is happening. For example, if a wetland classified as *Riverine Impounding* is impacted by a permitted fill, the compensatory mitigation should in most cases restore or create a *Riverine Impounding* wetland. This ultimately is the purpose of wetland compensatory mitigation—to replace the type and functions of wetlands that exist naturally on that landscape.

Wetland enhancement as a compensatory mitigation approach is also a concern. Because DSL is mandated to maintain both wetland acreage and function through the permit process, wetland enhancement by definition results in a loss of wetland area. The theory behind enhancement as a mitigation approach is that severely degraded wetlands will have their condition and functions demonstrably enhanced, those enhancements will offset the permitted wetland loss of wetland function, and the enhancements will be self-sustaining. Permit staff report that most enhancement mitigation plans submitted fall far short of this standard. Also, as this study revealed, enhancement was used 30 percent of the time but had the highest failure rate. For this reason, DSL will develop clearer guidelines for what constitutes an acceptable wetland enhancement mitigation plan.



The efforts described above should allow staff to make better science-based decisions and result in improved conservation of the state's wetland resources. In addition, clearer guidance and expectations provided "up front" to permit applicants will result in better mitigation proposals and, thus, improved turnaround time for issuing permits. As better functional assessment methods are developed (such as the Oregon HGM), we should be better able to evaluate functional success of mitigation sites in addition to compliance success.

For more information about this study, contact Steve Morrow at 503-378-3805 ext. 297, or at Steve.Morrow@dsl.state.or.us. ■

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- Kentula, M.E., et. al. 1992. Trends and patterns in Section 404 permitting requiring compensatory mitigation in Oregon and Washington, USA. *Environmental Management* 16(1):109-119.
- Shaich, J.A., and K.T. Franklin. 1995. Wetland compensatory mitigation in Oregon: a program evaluation with a focus on Portland metro area projects. Oregon Division of State Lands, Salem, OR.

## National Research Council Tackles Wetland Mitigation

At the request of the U.S. Environmental Protection Agency, the National Research Council (NRC) has established a multidisciplinary committee to review the scientific and technical literature on wetland structure and functions, and options for mitigating wetland loss through restoration, enhancement, creation, and in-lieu fee programs.

The committee will evaluate our ability to restore wetland functions in a variety of environments and evaluate options for mitigating wetland loss. The main criterion of mitigation success in the evaluation will be the degree to which the structure and functioning of restored wetlands match those of naturally occurring wetlands in the same region. The committee will consider questions in three main areas:

- Mitigation goals and criteria for selecting mitigation project types
- Compliance with permit conditions
- Mitigation success or failure

The committee also will consider what research is needed to improve compensatory mitigation success.

Wetland scientists in Oregon and Washington, including DSL staff, are making plans to meet with committee members to discuss the results of research in this region and our interest in incorporating hydrogeomorphic classification into compensatory mitigation criteria. The committee plans to visit a few regions of the U.S., including the Pacific Northwest, to analyze an illustrative set of wetland mitigation projects. The NRC study report is due to be released by February, 2001. ■

## Rulemaking Heads Up

Wetland rulemaking will commence this spring on several fronts. Topics and contact staff are:

- ***Freshwater Wetland Compensatory Mitigation*** (revisions)—Larry Devroy, Wetland Mitigation Specialist, larry.devroy@dsl.state.or.us (phone ext. 285)
- ***Statewide Wetlands Inventory/Local Wetlands Inventories*** (revisions)—Annette Lalka, Wetlands Inventory Specialist, annette.lalka@dsl.state.or.us (phone ext. 233)
- ***Jurisdictional Wetland Determination Procedures*** (new)—Janet Morlan, Wetlands Team Leader, janet.morlan@dsl.state.or.us (phone ext. 236)

If you would like to be added to the mailing list to be kept informed about these rulemaking efforts, please contact one of the staff members listed above. ■



# Do You Want to Be a Mitigation Banker?

By Larry Devroy, Wetlands Mitigation Specialist

It seems that a lot more people in Oregon are answering “Yes” to this question. Since the Compensatory Wetland Mitigation Banking Rules went into effect in early 1997, the Division of State Lands (DSL) and the Corps of Engineers have received mitigation bank prospecti from 13 different groups.

Two mitigation banks are up and running under the new rules—the Weathers Mitigation Bank in Gervais and the Oak Creek Mitigation Bank near Lebanon. Two banks are on the verge of approval—the Fernhill Mitigation Bank by the Unified Sewerage Agency located south of Forest Grove, and the Running Y Ranch Mitigation Bank near Klamath Falls. The proposed Mud Slough (Polk County), Marion (Marion County), and Camas Educational Network (several sites in Benton, Lane, and Linn Counties) banks are just starting to develop their “mitigation bank instruments” (the document that formally establishes the bank) with their respective interagency Mitigation Bank Review Teams (MBRTs). Finally, the City of Silverton’s mitigation bank at the Oregon Garden appears to be heading down the homestretch.

Despite the popularity of the mitigation banking option among permit applicants, potential bankers need to be aware of the constraints placed upon mitigation banks and the institutional hurdles they will surely face. The following vexing issues continue to arise in mitigation bank development.

## Bank Service Area

A service area is defined in rule as “that area in which credits from a mitigation bank can be used to compensate for unavoidable wetland losses due to removal, fill, or alteration activities.” In plain English, it’s the geographic area that the bank may serve. The rules limit the maximum size of the service area to the “sub-basin” in which the bank is

located, which can be quite large. However, MBRTs typically express strong opposition to service areas so large that permit applicants can use banks more than 15 to 20 miles away; the concern is that the localized effects of wetland functional losses cannot be offset by mitigation far from the impact site. A related concern is the greater potential for a “mismatch” between wetland types and functions when the impact site and the mitigation site are far apart. These concerns must be balanced with how large the service area must be in order for the banker to succeed from a financial standpoint.

## High Standards and Lead Time

A second common issue—OK! it’s a complaint—is the time it takes to establish a bank. The first two mitigation banks required 11 months from the date the public notice was published to the date DSL and the Corps signed the final mitigation bank instrument. It seems like a long time, but several facts must be considered to keep this in perspective. First, once operational, a mitigation bank does expedite the permit process by providing more reliable mitigation, but because the bank provides mitigation for many different impact sites there is also a much bigger potential for wetland loss if the bank fails ecologically. Therefore, we look for higher quality all the way down the line—from initial project design through construction. This quality assurance takes time. Also, everyone serving on MBRTs is in high demand for their expertise and is very busy, so meetings and document review time must accommodate busy schedules.

## Competition

Another challenge bankers can face—too much competition—is a product of our success. If several banks have overlapping service areas, they will compete with each other for sales of credits in the common area



and the bank sponsor who sells credits at the lowest price will almost always close the sale. Permit applicants are only interested in purchasing X number of mitigation credits as required by their permit; better service or more functional wetlands are often irrelevant to them. Therefore, DSL has the obligation to consider the market when a new bank prospectus is submitted. We may identify land that seems perfectly suited for a mitigation bank ecologically, but we cannot in good faith consider additional banks due to the potential hardship a bank sponsor might face if we approve a bank in a region with insufficient development pressure or with another mitigation bank with many unsold credits. Experience in Oregon and other states suggests that bank sponsors in such situations tend to grumble and suggest that the permit agencies that approved the bank “owe them business,” which is clearly inappropriate.

### Common Misconceptions

Other “issues,” if we should call them that, are the misconceptions about how banks work and what a mitigation bank actually is. We often get requests from well-meaning landowners and persons whose land development options are constrained by wetlands to “please bank my land in the wetland mitigation bank.” While DSL attempts to keep a list of landowners with potential mitigation sites in order to put them in touch with permit applicants needing sites, the state does not operate a bank of its own. DSL’s role with banking is to assist potential and actual mitigation bankers with the development and operation of their banks, and ensure that the mitigation bank rules are followed.

Another misconception is that a landowner with a large, high quality wetland can “bank” that wetland. Desirable as it is to protect high quality wetlands, DSL is required to maintain the wetland resource base through its permit processes and *replace* lost wetland area and functions. Wetland protection may constitute a very small part of a wetland mitigation bank, but the bulk of the project must involve restora-

tion, creation, and/or substantial enhancement of severely degraded wetland.

### Need a Banking Guidebook?

Mitigation Bank Review Team members, bankers, and others have contributed expertise and funds to develop a Mitigation Banking Guidebook for Oregon. The draft should be ready by June 2000. DSL is committed to strengthening and facilitating the appropriate use of mitigation banks throughout the state. Please contact Larry Devroy if you would like more information about mitigation banking or to be notified when the mitigation bank guidebook is ready for distribution. You can reach Larry by phone at 503-378-3805 ext. 285 or by e-mail at [larry.devroy@dsl.state.or.us](mailto:larry.devroy@dsl.state.or.us). ■

*Bank cosponsor Duane Smith checks the water table level at the Oak Creek Bank near Lebanon.*



## Planners' Page

### Wetland Planning with an ESA Twist

This year, DSL wetlands program staff are assisting two communities with wetland planning that includes a new twist—the plans should also help resolve conflicts with threatened and endangered species.

#### *Sutherlin and the Popcornflower*

In recent years, the City of Sutherlin has experienced one of the fastest growth rates in the state, but several development projects have been delayed because good wetland maps have not been available. As a result, the city, Douglas County, the local Water Control District, and other parties have recently joined together to finance a Local Wetlands Inventory (LWI) aimed at meeting several related planning needs. They recognize that wetlands are abundant on their vacant lands, and that development as well as optimal location of wetland compensatory mitigation sites will need to accommodate both wetland laws and a rare plant—the rough popcornflower.

The rough popcornflower, found only in seasonal wetlands near Sutherlin, was federally listed as an endangered species in January 2000. One of the reasons it is in danger of extinction is that much of its very limited remaining habitat is threatened by urban development.

The Sutherlin Wetland Planning Project will identify and map all wetlands in the study area and evaluate a variety of wetland functions, including flood control, wildlife

habitat, and potential rare plant habitat. A related project will identify suitable compensatory mitigation sites in the area, including former wetlands that could be restored. Together, these products will support the Recovery Plan for the popcornflower, resulting in faster wetland permitting for future development.

#### *Agate Desert Vernal Pools Present a Challenge*

Jackson County and White City have begun a similar wetland planning effort to balance the needs of development with conservation of rare vernal pool wetlands and the threatened Vernal Pool Fairy Shrimp. The Rogue Valley Council of Governments is facilitating a wetlands inventory, rare species survey, and many public meetings for local landowners and agency representatives to work together.

The Agate Desert is an unusual “patterned ground” formation that supports small, seasonal wetlands in shallow, gravelly soil perched on a hardpan layer that does not allow water to penetrate. Vernal Pool Fairy Shrimp were discovered in these pools in 1998. The shrimp were federally listed in California in 1994 for the same reasons that they are threatened in Oregon—loss of habitat to development. In the Agate Desert, less than 20 percent of the historical vernal pool acreage is still in relatively good condition and capable of supporting the species. The shrimp hatch when the pools fill up with winter rains; eggs laid in the mud survive the hot summer. Fortunately, the shrimp seem to get along OK with moderate grazing. These unique wetlands also support two rare plant species—Cook’s Desert Parsley and Large-flowered Woolly Meadowfoam—both of which are candidates for federal listing.

The Agate Desert vernal pool wetlands pose a substantial challenge to land use planning and development. Much of the vernal pool area is zoned for industrial development and some infrastructure is in place. State and federal wetland regulations

#### *Local Wetland Inventories Approved*

Since the last newsletter was published, the following LWIs have been approved by DSL:

Albany (Oak Creek area)	Port Orford
Clatskanie	Salem/Keizer
Coburg	Silverton
Lakeside	Waldport
Medford	Woodburn
Oregon City	



require replacement of wetlands destroyed by development, but to date no one has successfully recreated these unique, hardpan type of vernal pools. Therefore, mitigation for permitted losses of vernal pool wetlands must focus on preservation of existing high quality pools and restoration of altered pools.

The ultimate goal of the Endangered Species Act is to de-list species because they are no longer threatened. To reach this goal, adequate vernal pool habitat of sufficient quality will need to be protected to enable survival of the shrimp. The fundamental question is, how can the economic needs of landowners and the community be met while also meeting regulatory requirements and ensuring the survival of the shrimp and other vernal pool-dependent species? The most efficient way to reach this goal is to map all the existing and restorable vernal pool wetlands, survey enough of the pools to understand where the best shrimp and rare plant populations are, and identify the economic values of the affected land. With that information in hand, a comprehensive wetland planning approach could, with cooperation from all parties, protect adequate vernal pool habitat and result in a blueprint for predictable economic growth for the community.

### **Future Wetland Planning Assistance**

Many other communities in Oregon, with or without rare species, will soon be conducting Local Wetland Inventories as part of their required Goal 5 tasks. Unfortunately, DSL currently has no funds to provide pass-through grants to assist with these inventories. We anticipate providing direct technical assistance to a few smaller towns, as our limited staffing allows. We continue to seek other funding sources in the interest of both predictable development and effective wetland resource protection.

For more information, contact Dana Field, Wetlands Planner, at 503-378-3805 ext. 238 or [Dana.Field@dsl.state.or.us](mailto:Dana.Field@dsl.state.or.us) or Annette Lalka, Wetlands Inventory Specialist, at ext. 233 or [Annette.Lalka@dsl.state.or.us](mailto:Annette.Lalka@dsl.state.or.us) ■



### **Wetland Planning Guidebook in the Works**

**E**SEE got you down? Safe harbor not looking so safe? LWI, OFWAM, and LSW a total mystery?

DSL and DLCDC are teaming up to develop a wetland planning guidebook specifically tailored to address wetland planning requirements of Statewide Planning Goals 5 and 17. DSL recently received a grant from EPA to develop the guidebook and a companion short course. The main objective is to help local governments sort out the various wetland planning requirements and select the options that best fit their needs. In addition, the guidebook will include process outlines and examples of products.

We hope to have the guidebook completed by January 2002. If you have suggestions for what you'd like to see in such a guidebook, we'd love to hear from you. DSL contacts are Dana Field (503-378-3805 ext. 238) and Janet Morlan (ext. 236); the DLCDC contact is Betsy Parry (503-373-0050 ext. 253). ■

*Mitigation for permitted losses of vernal pool wetlands must focus on preservation of existing high quality pools and restoration of altered pools.*



## Who Am I? *Enough with the plant minutiae! Here's an easy one for you:*



You've likely startled these shorebirds up—and startled yourself as well—many times as you've walked across wet prairies or pastures in the spring. They arrive on their Oregon breeding grounds in March, building cuplike nests in wet meadows or shallow marshes. They feed by probing into saturated soil for insect larvae, earthworms, small crustaceans, spiders, molluscs, and small vertebrates. Final hint—it's the only shorebird that is a game species in Oregon.

Winning entries are the first three correct answers received by U.S. mail at

DSL. First-place winner (first correct answer) will receive a beautiful, full-color topographic map (24" x 36") of the Pacific Northwest by Allan Cartography, Medford. The next two correct entries will each win a stamped Beanery Coffee Club Card redeemable for a free Specialty Drink at The Beanery in Salem, Corvallis, Eugene or Ashland. (Yes, we are scraping the bottom of the barrel.)

**Mail entries to:** Janet Morlan, Division of State Lands, 775 Summer Street NE, Ste. 100, Salem, OR 97301-1279.



The Plant Conservation Biology folks at the Oregon Department of Agriculture came up with *more than one* correct answer to the last Who Am I? puzzle: “*What is the only genus of flowering wetland plants in which aerial, floating, and subsurface pollination systems have been reported?*”

Bob Meinke, Kelly Amsberry, and Steve Gisler noted that *Howellia aquatilis*, a threatened species in the Pacific Northwest, appears to meet the test, as does *Potamogeton* (several species of pondweed). The person who submitted the question suggested *Callitriche* (water starworts)!

For a closer look at *Howellia*, see [www.wsdot.wa.gov/eesc/environmental/Howellia.htm](http://www.wsdot.wa.gov/eesc/environmental/Howellia.htm)

## Wetlands Update

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