Designing Wetlands Preservation Programs for Local Governments

A GUIDE TO NON-REGULATORY PROTECTION

March 1992

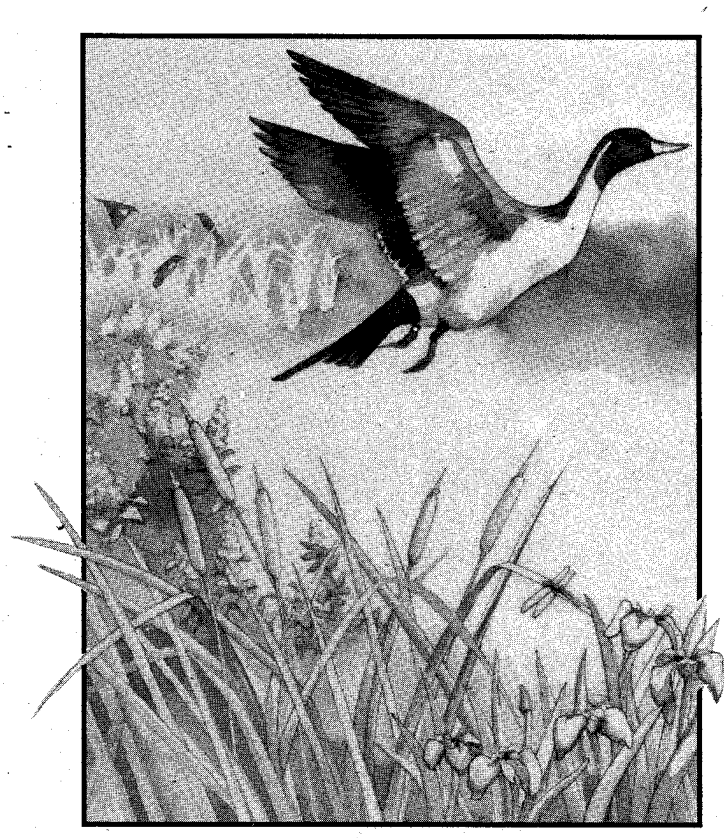

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Table of Contents

Preface

The Wetlands Protection Element of the 1987 Puget Sound Water Quality Management Plan included provisions for the establishment of a Puget Sound Wetlands Preservation Program (PSWPP). Work under this program began in 1988 with the development of a program plan by the Washington Department of Ecology (Ecology), Department of Natural Resources, and several other state agencies. A citizens' advisory committee was also established to identify ways of advancing wetlands preservation efforts begun by the state.

One recommendation of the citizens' advisory committee was that local governments and land trusts be solicited to address wetlands preservation at the local level. Responding to this recommendation, Ecology applied for and received funds from the U.S. Environmental Protection Agency to initiate a Puget Sound Estuary Program Action Plan Demonstration Project. As part of this project, King County was selected by Ecology to establish a wetlands preservation program in the Puget Sound Basin- one that could serve as a model for local governments throughout the state. Two years later, the King County Council voted unanimously to establish the first county-level wetlands preservation program in Washington.

Also created as part of the demonstration project grant, this guidebook is designed to assist local governments in developing wetlands preservation programs of their own. The text of King County's model program is presented in Appendix B of this book, serving as an example for local government of how a wetlands preservation program can operate.

What exactly is wetlands preservation? This term refers to the process of establishing a public and/or private stewardship program to acquire or otherwise "secure" wetlands from development or resource extraction and then maintain these systems in a natural state. Education, regulation, and preservation are the pieces of comprehensive wetlands protection effort. An additional piece, the integration of restoration activities, is a critical final step for achieving a goal of "no net loss" to either wetland function or acreage.

Separate chapters of this guidebook have been devoted to explaining the component parts of a preservation program. In each chapter, the major considerations and available planning and implementation options are discussed. A "Feature" of special interest to wetlands preservation is also provided at the end of, each chapter, as are a summary of key points and a short list of key references. A full bibliography, detailed description of the King County program, and funding sources are presented as appendices to this book.

Topics addressed in this guidebook include:

The Role of Wetlands Preservation Programs (Chapter 1)
To slow and eventually stop, any further loss of wetland function or acreage, governments need to participate in comprehensive wetlands protection programs. This chapter looks at four major elements of such programs- regulation, preservation, education, and restoration- and the relationships among them.

Program Design (Chapter 2)
To create a wetlands preservation program, specific program goals and objectives must be formulated. Program components and tools must be assessed, and an implementation plan developed. Procedures for monitoring success and making modifications to the program must also be adopted.

Program Administration and Coordination (Chapter 3)
Administration and coordination of the preservation program is the glue that holds the various components together. It is critical to have a point person responsible for program oversight. Coordination and the establishment of partnerships will play a key role in program implementation.

Selection Criteria and Process (Chapter 4)
Selecting wetland sites for preservation requires the application of criteria that consider a broad array of attributes such as wetland functions and values, site conditions, location; local community needs, liabilities, and management costs. Selecting sites for immediate action will require numerous factors to be identified and considered.

Wetlands Inventory (Chapter 5)
An inventory of wetlands is an essential part of a preservation program. The inventory identifies the locations and general character and conditions of wetlands that may be of interest to the preservation program. Initial identification of high quality sites will be based on the functional attributes and estimated long-term viabilities of the wetlands. Additional criteria will be used to identify final target sites for preservation.

Site Acquisition (Chapters 6 and 7)
Outright purchase of wetlands is the most effective preservation technique, because it results in a high level of ownership interest in the property (and thus confers a higher degree of control), making it easier to protect resource values. However, there are many other effective techniques for securing sites. Acquisition may be accomplished through purchase, donation, or a combination of the two, and may result in fee-simple or less-than-fee ownership interest.

Site Management (Chapter 8)
Management and long-term stewardship are critical for maintaining any wetland systems that are acquired. For each area, a site-specific management plan should be developed that includes a monitoring plan designed to periodically evaluate the wetland to ensure continued viability.

Program Funding
For any preservation program, some level of funding support will be necessary. Two major areas that require financing are site acquisitions and -site management. Many creative options for meeting these program needs are available to local jurisdictions.

Education and Public Involvement
Educating and involving the public is particularly important to the success of a preservation program. Educational efforts should focus on preservation-related activities, such as publicizing the program and its successes, or stewardship techniques. Working with citizens' groups and volunteers can help facilitate many of the core needs of a preservation program.

Ecology is currently working to develop other guidebooks that will address the elements of education and restoration. These should be available in late 1992. Staff of the Wetlands Section of Ecology's Coastal Zone Management and Shorelands Program and members of King County's Environmental Division are available to provide technical guidance to jurisdictions interested in establishing wetlands preservation programs.

Summary

Each Year, development modifies the landscape and, as a result, drastically changes entire ecosystems. Wetland systems are particularly sensitive to these drastic changes. The only way to effectively protect wetlands from degradation and eventual destruction is through comprehensive land-use planning, which incorporates regulatory and non-regulatory wetlands programs.

A wetlands preservation program is an excellent non-regulatory means of managing valued wetlands. With a goal of maintaining _ wetlands systems on the landscape, local government can design wetlands preservation programs that reflect the community's priorities and values.

Wetlands preservation begins with a close examination of the community. The local political climate should be considered, the public consulted, and, possibly, a citizens' advisory group formed. -Initially, it is very important to set goals and objectives, develop an implementation plan, and create procedures for monitoring and evaluating the progress of the wetlands preservation program.

The costs of preserving wetlands - both to develop a program and to manage preservation sites - must also be considered. It is important to recognize that the complex qualities of wetlands are not easily replaced. Any up-front costs of a wetlands preservation program will be considerably less than those incurred while attempting to restore or replace the functions of wetlands that are degraded or lost.

Clearly defined goals and objectives set the direction of the program. It is best that these be formulated to address the maintenance of habitat diversity, floodplain management, protection of rare or valued plant communities, ecosystem health (the connectivity and integration of key quality wetlands systems within the landscape), and other long-term needs of the community. Preservation goals and objectives should also complement those of other wetlands protection and natural resource programs.

An implementation plan identifies the tools, specific actions, key players, and any other elements that are necessary to achieve program goals. The appropriate means of administering and coordinating the program should be established. This may entail the redefinition of guidelines and mandates within departments, or the development of partnerships with other players such as cities, counties, and land trusts. A timetable should also be developed for monitoring the program and evaluating its success, enabling the appropriate course corrections to be made and increasing the effectiveness of preservation efforts.
ix `

The criteria that will be used to select wetland sites for preservation must be defined. These criteria should focus on the ecological attributes of wetlands and the managerial and political considerations of the program. The relative importance and specific application of each criterion should be identified and a means of assessing the criteria (an assessment method) should be developed.

To target specific wetlands for preservation, it may be necessary to conduct a special inventory of wetlands, collecting information on the locations, sizes, qualities, and other characteristics of wetlands within the jurisdiction. Information needs of the inventory will be dictated by the program's goals, as elucidated by the criteria. The results of such a comprehensive wetlands inventory will allow local government to develop a working list of desirable sites, from which target sites for immediate action (within the context of maintaining healthy and complete ecosystems) can be identified. This list will need to be updated, periodically removing secured sites and adding new target sites.

Once wetlands have been targeted for immediate action, the process of securing the sites begins. Acquisition options include purchase, bargain sale, reserved life estate, donations, and conservation easements. Local government staff may negotiate directly with landowners or obtain assistance in securing the site from land trusts or citizens' groups.

There are several stages in securing a wetland. These include pre-negotiations, follow-up site assessment, identification of the custodial entity and preliminary management intent; and final negotiations. Throughout these steps, local government should strive to be flexible, responsive, and creative.

Custodial responsibility should be established and a site management Plan developed for any secured wetlands. Again, creativity may be necessary, because many local governments have limited experience and staff to manage wetlands. The management plan should address comprehensive protection to preserve wetland functions, ongoing maintenance needs, and enforcement mechanisms. By periodically monitoring and assessing wetland conditions, management actions can be modified to eliminate detrimental impacts to the site.

Options for funding the preservation program and offering incentives to landowners will need exploration. Maintaining an ongoing source of funds for site acquisition and management will present the biggest challenge to local government. However, several funding sources and alternatives are available.

Involving citizens in the preservation program will garner community support and boost the success of the program. Citizen volunteers can facilitate partnerships between public and private sectors, establish and operate land trusts, and provide public education and technical assistance. Volunteerism can enhance program efforts and give the public a greater sense of ownership in the preservation program. Working as partners with local government, land trusts are invaluable agents for negotiating with landowners, overseeing conservation easements, and managing preserved lands.

Chapter 1
Introduction:
The Role of Wetlands Preservation Programs

Wetlands are among the most productive and valuable of natural resource areas providing a wide variety of environmental and human benefits. Yet, despite increased public awareness, wetlands continue to be lost at a rapid rate.

To slow and eventually stop. any further loss of wetland function or acreage both federal and state governments adopted goals o f "no net loss." To achieve this goal, local governments need to participate in comprehensive wetlands protection programs. This chapter looks at four mayor elements of such programs - regulation, preservation, education, and restoration - and the relationships among them.

Wetlands serve many natural functions. They provide critical feeding and breeding habitat for fish and wildlife, including -threatened, endangered; and commercially important species. Regional studies have shown that over 212 wildlife species in western Washington and 285 species in eastern Washington depend on wetland areas during some part of their life cycle. Wetlands improve water quality by trapping sediments and assimilating pollutants and excess nutrients. They also recharge groundwater and maintain stream flows, control runoff and store flood waters, and reduce erosion end stabilize shorelines. Additionally, wetlands offer recreational and scenic opportunities and provide outdoor classrooms and laboratories:

Figures on wetlands losses in Washington State vary, due in part to the scarcity of historic data. However, best estimates indicate that because of agricultural and developmental impacts, up to 50 percent of Washington State wetlands have already been lost or degraded since settlement. Localized areas have experienced much higher losses; for example, 70 percent of all shorelines with tidally influenced emergent wetlands in Puget Sound have been lost because of diking, dredging, and filling activities. Urbanized areas in the Puget Sound region have` suffered losses ranging from 90 to 98 percent. Commercial, agricultural, and residential development all contribute to the loss of wetlands.

Activities adjacent to a wetland can degrade and destroy wetland habitats, increasing sediment and pollutant loads, altering water regimes, and disturbing wetland vegetation and wildlife. This leads to invasion of exotic plant species, altered plant communities resulting in decreased diversity, and likely conversion of the wetland to an impaired or non-functioning state. Minimal buffers retained around wetlands reduce some of these off-site disturbances but cannot completely eliminate all impacts from them. When development takes place near wetlands, some degradation usually occurs.

Nationally, wetland losses and degradation have already resulted in significant impacts. For example, it has been suggested that North American migratory duck populations have declined by about 40 percent in the last 10 years. Other results of wetland losses (such as increased flooding and erosion) are also well known. Despite such knowledge, and federal and state no-net-loss policies, wetlands are still being lost at a rapid rate. To effectively address this problem, coordinated, comprehensive wetlands protection is needed at all levels of government.

Local governments can help by developing and implementing programs for wetlands protection. Using local knowledge and local resources, these jurisdictions can augment federal and state programs to the benefit of their constituents and the resource.

Current Wetlands Protection Programs

Some local governments already have regulations or certain other elements of a comprehensive wetlands protection program in place. However, these governments may be lacking other elements, such as education, preservation, or restoration. Other mechanisms not specifically designed to protect wetlands are often in place and can be incorporated into wetlands programs. For example, open space programs are fairly common among local governments, but they are rarely focused on wetlands, preserving them only in an incidental fashion.

This section describes some existing programs for wetlands protection. A comprehensive wetland protection effort should include elements from all of these programs.

Regulatory Programs provide some wetlands protection. On the federal level, Sections 404 and 401 of the Clean Water Act and Section 10 of the Rivers and Harbors Act provide a permitting sys tem for projects that affect waters of the United States, including wetlands. The National Environmental Protection Act, Coastal Zone Management Act, and the "Swampbuster" provisions of the 1985 Food Security Act also provide some limited wetlands protection.

Washington State protects some wetlands through regulatory programs such as the Hydraulic Project Approval process, the Shoreline Management Act, the State Environmental Policy Act (SEPA), and the Flood Control Maintenance Act. However, these state programs do not protect many wetlands - especially those wetlands that do not meet restrictive size or other jurisdictional criteria. A new regulatory addition is the state's recently passed Growth Management Act, Chapter 36.70 of the Revised Code of Washington (RCW), which requires local governments to adopt regulations to protect wetlands and other sensitive areas.

Several local governments have regulatory programs to protect wetlands within their jurisdiction. Shoreline Master Programs, sensitive or critical areas ordinances, and project review through the SEPA process are the most common regulatory methods a - employed by local jurisdictions. Recently, a model ordinance was ' developed by the Washington State Department of Ecology (Ecology) to guide local governments in the formation of more comprehensive regulatory programs for wetlands.

Ecology publication #88-5, Wetlands Regulations Guidebook, contains more information on these regulatory efforts.

Preservation Programs (where wetlands are acquired or otherwise secured from development) have historically been implemented through the efforts of federal or state government. The National Wildlife Refuge System and the North American Waterfowl Management Program are examples of national programs to preserve critical wetland areas.

The best known state preservation programs include the Migratory Waterfowl Stamp Program of-the Washington Department of Wildlife (WDW), Washington Department of Natural Resource's Natural Heritage Program, and interagency efforts under the Puget Sound Wetlands Preservation Program. These efforts target highest quality wetland areas of regional or state importance. Because of the financial limitations of these programs, locally important wetlands are not included for preservation.

Some local governments have programs for the acquisition of parks and open space lands. Although a number of wetlands have been incidentally preserved under these programs, these acquisition programs have generally not focused on-wetland areas. Open space taxation programs for landowners are available, but local governments do not always use the open,, space classification to include wetlands.

Education Programs have been undertaken sporadically by all levels of government: The critical nature of providing education and public information on the functions and values of wetlands and the role they play on the landscape cannot be overemphasized. Improved public understanding inevitably leads to educated personal choices. Such understanding also galvanizes public support for both regulatory and non-regulatory wetlands protection programs at all levels of government.

Ecology has been involved in an extensive wetlands education effort for many years. The agency is actively developing and distributing wetlands informational materials and is combining these materials with training programs on wetland issues. Also, there are several citizen organizations that have developed wetlands education and public outreach programs in Washington.

Restoration Programs are also important. Restoration is the act of returning a wetland from a disturbed or totally altered condition to a previously existing natural condition. Wetland restoration is often confused with enhancement and creation. Enhancement involves actions taken to increase the functions and values of all or a portion of an existing wetland (sometimes at the expense of other functions and values). Creation is the establishment of a wetland in an area where one did not exist before.

Links Between Preservation and Regulation

Preservation programs and regulatory programs share the same overall goals of wetlands protection and no net loss. As such, many aspects of these two types of programs augment each other. For example, a regulatory program may educate landowners about the variety of functions that wetlands perform. Landowners may then be more inclined to support management strategies that protect wetland functions and values for longer periods than an individual's lifetime.

Other links between preservation programs and regulatory programs occur in the area of incentives. Often part of a regulatory program, incentives such as the transfer of development rights can help preserve wetlands. Other non-regulatory incentives such as current-use taxation valuation (discussed in detail in Chapter 9) can also enhance the objectives of a preservation program.

While various elements of wetland protection programs can augment each other, it's important to make distinctions between preservation program and regulatory program activities. For example, stringent selection criteria should be used to differentiate wetlands for purchase from those that are protected under regulations.

Restoration programs are beginning to appear at the federal and state level. The U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers, U.S. Environmental Protection Agency (EPA), Ecology, and WDW are some of the players in this effort. In particular, the USFWS and WDW have initiated a partnership for the implementation of the Washington State Ecosystems Conservation Project to restore upland and wetlands wildlife habitat areas on private lands. More partnerships are being formed between _ agencies to facilitate restoration program development. Numerous local projects are underway in various areas of the state.

The technology to successfully restore wetlands is still lacking. Nonetheless, research projects are underway in this state and elsewhere to improve our understanding of this complex task.

The Benefits of a Local Preservation Program

Without a full range of regulatory and non-regulatory protection programs in place, it is impossible to stop the loss of wetland areas and maintain the functions they provide. If a local government has a regulatory program already in place, a preservation program is the next logical step toward achieving this goal. However, preservation programs can also be developed independently of regulatory programs.

By addressing wetland functions related to water quality, stormwater, and flood control, local regulations provide for the protection of public health and safety. It has been argued that these may be the only wetland functions that can be protected through local regulatory (police) powers. Functions related to ecosystem health and habitat quality may not be comprehensively or holistically addressed in this way. For example, a species such as the great blue heron, which uses both wetland and upland habitats to feed and upland habitats to breed, may need more widespread protection or management. Opportunities for public access, recreation, educational pursuits, and scenic value can also be inadequately protected by local regulations.

Local regulations fall short if they offer only a narrow site-by-site approach to protecting functioning attributes of the landscape. Discrete, project-by-project decisions do not take into account the cumulative impacts on ecosystem health. Also, under regulation alone, a decision not to alter a particular site may have to be defended again and again, until eventually (should regulations change or a once-vocal constituency of wetlands protectors become silent), the site may be lost. Long-range planning and provisions to permanently protect intact systems -do not frequently occur within regulatory programs. For the long-term health and maintenance of the natural ecosystems and, ultimately, the human community, methods are needed that provide protection beyond that of a regulatory focus. This is the role of a preservation program.

A preservation program can address long-range planning for ecosystem protection, thus filling this gap. Preservation can be used to effectively secure important portions of the landscape that are highly valued to the community and that cannot afford to be lost.

Preservation programs also provide a cooperative community approach to protecting wetlands, demonstrating to the public that the local government is trying to find non-regulatory methods to protect wetlands. This may be especially important in conservative jurisdictions, where the public is often opposed to more government regulation. In an area where it is difficult to adopt regulations, a preservation program may be a way to protect some wetland areas, while at the same time educating people about their value.

F E A T U R E

The Economic Benefits of Wetlands Preservation

Many people believe that purchasing wetlands is costly. Certainly, up-front expenses are associated with closing real estate transactions. But recent studies show that the economic return from preserving land is considerably greater than the initial capital outlay:

An array of direct economic benefits are received from the preservation of open space. Factored into the economic equation, these benefits directly offset any initial acquisition costs.

Real Property Value
Open space provides a variety of amenities, which are often reflected in increased real property values and increased marketability for nearby property. For example, following a greenbelt acquisition in Boulder, Colorado, a 32-percent higher market value was noted for adjacent properties (National Park Service, 1990). An increase in property values generally results in increased local tax revenue.

Nature-based Tourism
Nature-based tourism, or "ecotourism," is one of the largest growth sectors within the travel industry. Tourism itself is predicted to be the leading industry in the United States by the year 2000. Nature-based. tourism represents a new form of activity where participants seek out undeveloped, natural settings to pursue recreation. In a poll conducted for the President's Commission on Americans Outdoors, it was found that natural beauty was the single most important criterion for tourists selecting a site for outdoor recreation.

Expenditures Within the Community
Purchases of recreational lands can bring economic benefits to a community that are one-and-a-half to three-times greater than the original recreation-related expenditure. This is because the benefits include revenues from direct expenditures (purchases by users), indirect expenditures (purchases by producers), and induced expenditures (purchases by households receiving wages from producers).

Facilities associated with an open space also contribute benefits -through the support of local business for supplies and services, and through the new jobs created by corporations that relocate for "quality of life" amenities.

Cost Reductions for Public Services
Reduced costs for public services, pollution control, and public health care are some of the economic benefits to communities that conserve greenways, rivers, and other open spaces. There are significantly higher costs associated with providing public services to residential development than can be recouped in revenues received. For example:

- In Loudoun County, Virginia, annual deficits per thousand units range from $0.6 million to $2.3 million (1986 dollars).

- The city of Boulder, Colorado, maintained open space at a cost of $75 per acre - less than 3 percent of the cost for non-open space maintenance - in 1988.

- In a study of three communities in Dutchess County, New York, the cost of servicing open space ranged from 17 to 74 percent of each dollar in revenue received. The cost of servicing residential neighborhoods exceeded each revenue dollar by 11 to 23 cents (Scenic Hudson, 1989).

These figures are firm proof that additional development is not always cost-effective to the community.

Cost reductions in hazards mitigation and pollution control can also be traced to open space preservation - particularly when the open space is a wetland. Whenever wetlands are lost, an array of environmental services - including flood control, water purification, erosion control, and shoreline stabilization - must be replaced. The cost of such technological replacement is usually borne by both public and private sectors.

Providing a community with more open space for recreational activities leads to improved personal health - and translates into significant savings in the cost of individual health care. In addition, the reduction in noise and the aesthetic values of preserved open space are both enhancements to the quality of life within the community.

What are the Actual Savings and Costs?
It is difficult (and sometimes impossible) to calculate the monetary value of functions provided by wetlands. However, in a few instances, dollar amounts have been assigned. For example, to assess the costs associated with achieving flood control in the Charles River Basin in Massachusetts, the Army Corps of Engineers determined it was more cost-effective to acquire wetlands than to construct flood control facilities. Having identified the flood ° control value per wetland acre at $33,000, they gladly paid $2,000 for each acre of wetlands, acquiring a total of 8,115 acres in the deal.

When calculating the monetary value of wetland functions, it can be helpful to assess their replacement and damage costs. Costs of replacing wetlands functions with technological facilities (including the costs of ongoing operation and maintenance) and of addressing the damage to property from increased flooding and erosion should be considered. When all these costs have been factored in, it is usually a bargain, to retain the natural systems by purchasing them.

Of course there are many valuable wetlands functions that, once lost, cannot be replaced. If habitat values (such as nursery attributes that support the fishing industry), species diversity (which provides recreational dollars in the form of hunting and fishing licenses and tourism), and other functions are adversely affected, the direct economic impacts to the community can be sizeable.

Key Points

▼ Effective wetlands protection requires non-regulatory as well as regulatory programs. A preservation program is an important non-regulatory approach and complements regulations with improved wetlands protection.

▼ Preservation refers to the maintenance of natural systems by establishing a public and/or private stewardship program to acquire or otherwise secure wetlands for protection and maintenance of the natural systems in perpetuity.

▼ Economic benefits provided by wetlands are considerably greater than the initial cost of purchase.

Key References

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Chapter 2
Designing a Preservation Program

This chapter discusses the necessary steps for establishing a successful preservation program: defining specific program goals and objectives, assessing existing and needed program components and tools, establishing an implementation plan, and developing a procedure for monitoring success and making modifications to the program as needed.

Setting Goals. and Objectives

Development of a preservation program begins with the setting of goals and objectives for wetlands preservation within the jurisdiction. The goal-setting process should be made public, and the local government may want to form a citizen's advisory committee for this purpose. .

Although the two terms, goals and objectives, are often used - together - sometimes interchangeably - they are not the same. A goal is a broad statement of purpose. Objectives are the incremental pieces which, when enacted, will accomplish that goal. The establishment of clear goals and objectives is an important step toward setting the program in motion, allocating funding, and measuring success at achieving the desired end results. Because preservation programs should outlast any individuals associated with, them, stated goals and objectives will help ensure that program consistency endures.

Generally, the goals of a wetlands preservation program should include the following concepts:

- Wetlands of local, state, or regional significance should be preserved so that future generations may enjoy the benefits of viable wetland ecosystems..

- The preservation program should complement and be coordinated with

    - Other wetland protection programs (such as regulatory or education programs) to effectively meet wetland protection goals such as no net loss f wetlands function and acreage

    - Other natural resource programs and plans, including open space and parks plans

    - Other wetlands protection programs of neighboring local jurisdictions and state and federal agencies.

- The preservation program should strive to maintain the health of wetland ecosystems and to integrate wetland components into larger functioning ecosystem ,units on the landscape.

A goal of no net loss of wetlands functions and acreage has been endorsed at both the federal and state levels and by some local . jurisdictions in Washington, such as the City of Bellevue and King County. Other goals may focus on special interests or needs of the local community. For example, a jurisdiction may decide that flood control is the highest priority function for wetlands. It would, therefore, concentrate on identifying and protecting those wetlands that perform that function best. Other jurisdictions may decide to emphasize recreation and education or the protection of natural systems and public resources. For instance, if the goal is flood control, a piece of flat, marshy pasture land beside a river may be a perfect candidate; for wildlife habitat protection, a complex forested wetland may be better; and the shore of a lake might be the best target for developing a complementary recreational site.

Goals and Objectives: A Landscape Approach

To preserve wetlands and other functionally viable components of the landscape, it is important to understand and respond to the interconnected ness of natural systems. -For this reason, researchers Gosselink and Lee (1987) make a strong case for adopting goals and objectives that conserve the landscape system. Such an approach, they maintain, is the best way to effectively balance a variety of goals and objectives - avoiding the common pitfall of maximizing one goal or objective at the expense of all others.

There is another good reason for this type of approach. Maintaining a functionally viable natural system is the least costly way, in terms of both resources and dollars, to maintain desired functions and values.

Objectives define, in manageable pieces, how the program will be implemented and within what time frame. Setting objectives also helps define the terms with which wetlands are inventoried, prioritized for action, and allocated program funds. For example, efforts to control flooding within a community may lead to a preservation program focused on securing wetlands that provide high floodwater attenuation qualities within the developing watersheds. An objective in this case would be to secure wetlands within a particular watershed.

Another objective might be to acquire those wetlands that demonstrate the highest levels of plant and animal diversity within some geographic area or to secure all of the most pristine wetlands remaining within jurisdictional boundaries. Likewise, recreation, education, -or open space/aesthetic values may be focused on with objectives set for securing a certain percentage of wetland open space.

Establishing milestones for progress (for example, to acquire a particular wetland by a set date) helps to focus work toward the specific objectives and measure program progress. Milestones may correlate with fiscal year cycles or other pre-existing planning time frames.

Evaluating Situations and Identifying Needs

After setting goals and objectives, it is necessary to assess the current situation within the jurisdiction and to determine what components and tools will be needed to implement the desired program.

As part of this process, local governments should identify and evaluate all existing regulatory and non-regulatory wetland- or r resource-related programs that can be tied into wetlands preservation efforts. What tools, resources, programs, and projects are already in operation? Is there an existing open space current-use assessment program, a land management department (such as for parks and recreation), a conservation futures tax, or some other potential funding source?

By comparing preservation program goals and objectives to existing mechanisms, a jurisdiction can identify gaps. Some gaps can be filled with existing mechanisms that have been modified to better suit the needs of a wetlands preservation program. Others will require that new mechanisms are put in place.

The Language of Preservation: Important Terms

In this guide, the terms securing or acquisition are used interchange- ably to refer to the act of purchasing or otherwise obtaining wetlands through direct and indirect means (such as donations, easements, and agreements) for purposes of preservation.

Program components are the parts of a complete program that are needed to effectively preserve wetlands. These components include program administration and coordination, the wetlands inventory, and the process of securing and managing a site.

Tools are techniques or tactics for implementing any one of the program components. For example, tools for securing a site could include conservation easements, purchase, donations, or land swaps.

A wetland's functions are its innate roles in a watershed or ecosystem -for example, flood detention, biodiversity, and water recharge - and the amenities such as recreation, aesthetics, and education that the wetland provides.

Values reflect the importance of wetland functions, as perceived by a person, a community, and a society. The value placed on any given wetland may vary. Recently, society has come to value wetlands highly, in part because we now recognize the many indispensable functions they provide and the critical roles they play in the environment.

Preparing a Program Implementation Plan

A program implementation plan outlines the process with which program goals and objectives will be met. It starts with the stated goals and objectives of the program, then defines the necessary parts of the program, establishes a series of tasks, assigns responsibilities, and sets program parameters. It answers questions such as: What components of the program will be emphasized and how? Who will coordinate and administer the program? Who will be involved and what. roles will they play? How will activities be coordinated? What are the funding sources?

In addition to a clear statement of defined goals and objectives, other components of the plan. include descriptions of program administration and coordination; a process for selecting and targeting sites for action; the wetlands inventory approach; an acquisition or securing effort; long-term custodial management; program funding; and a public education/citizen involvement effort. These components are described in detail within chapters of this guidebook.

Once the general program plan has been developed, there is no optimum time sequence for implementing program components, because the circumstances in each jurisdiction will be different. Program components could be implemented simultaneously or one at a time depending on the goals, needs, and resources of a particular local government.

Evaluating the Program

The achievements of any wetlands preservation program should be evaluated periodically to determine whether the program is meeting its goals and objectives. During this evaluation, any changes that will improve the program's effectiveness should be noted.

It is recommended that such an evaluation be conducted every two to five years.

The key to a good evaluation lies in the selection of specific, measurable objectives. Fulfillment of these objectives will also be linked to the implementation steps outlined in each program implementation plan.

F E A T U R E

Preservation From a Landscape Perspective

Wetlands do not function as discrete entities. Instead, they exist as functional parts of a larger landscape ecosystem. The interactions and dynamics between the different functional parts are as important as the dynamics within that ecosystem. For example, wetlands are influenced by hydrologic dynamics within the surrounding watershed. Effective preservation of a wetland must therefore include an assessment of the potential land-use activities that may affect water quality or quantity. In addition, the survival of certain animal species may be threatened by the presence of incompatible land-use activities or enhanced by the presence of greenbelt corridors, which provide opportunities for migration and genetic ex-change. For these. reasons, effective preservation over the long term involves assessing the wetland within the context of the landscape.

There are several strong arguments for adopting a landscape approach. The first is largely economic. As the focus narrows from the ecosystem or landscape perspective toward specific systems, communities, populations, or individuals, management costs tend to increase and the probability for long-term-protection decreases. Expanding the focus toward protection of viable ecosystems provides a cost-effective alternative and enables increased potential for long-term viability of a larger diversity of species.

A landscape perspective to preservation supports identification of regional priorities. This, in turn, requires an analysis of existing preservation sites and programs. Specifically, information on the extent and variety of protected wetland types and the species protected within these sites is important for identifying gaps in the programs. From a regional perspective, it is also important to consider how preserves can be designed to protect the broadest number of species.

Gap Analysis: An Innovative Approach

Gap analysis is an approach to conservation that emphasizes a broad-based ecosystem focus for the preservation of biotic diversity. Gap analysis shifts the focus away from protecting the habitat of threatened or endangered plants or animals and toward the protection of areas identified for the integrity of existing natural plant communities and ecosystems. It is based on the assumption that protection of diversity within functioning ecosystems is a prerequisite for the protection-of species diversity. Gap analysis is aimed at preventing species from becoming endangered.

With gap analysis, a series of maps - vegetation types, protected land, and distribution patterns of plants and animals - are overlain, and any "gaps" in protection are identified. More specifically, vegetation types are viewed as indicators of specific plant and animal communities. A focus on areas of species richness or types of vegetation that have not been protected within the region provides a cost-effective means for protecting biodiversity. Because many species depend on more than one habitat type for survival, a'6road-based ecosystem approach - one that protects a combination of habitats - also increases the probability of long-term protection for all species.

Getting Around a Fragmented Landscape

A landscape focus for preservation also favors the development of a network of reserves, connected by corridors. Within a fragmented landscape, a network of reserves connected by corridors can provide opportunities for the migration of species between reserves, potentially offsetting the problems inherent in most small reserves. Corridors also provide opportunities for species to use a variety of habitat types. However, the disadvantages of corridors have also been documented. These include increased exposure to invasive species or predators, transmittal of disease between areas, and fire hazard (Simberloff and Cox, 1987). The costs and benefits of corridors should be weighed to determine the most appropriate choice, which will also depend, in part, on the habitat requirements of species identified for protection within the reserve.

Key Points

▼ Initial actions in designing a wetlands preservation program include:

- Setting specific pro-gram goals and objectives
- Evaluating existing situation and needs
- Developing a program implementation plan
- Making provisions to evaluate the program and its goals and objectives.

▼ Preservation from a landscape perspective provides more cost-effective and, successful protection of wetlands and other systems.

Key References

Hoose, P. 1981. *Building an Ark: Tools for the Preservation of Natural Diversity Through Land Protection.*

Kusler, J. A. 1983. *Our National Wetland Heritage: A Protection Guidebook.*

Chapter 3
Administering and Coordinating the Program

The glue that holds a program together, administration and coordination are fundamental parts o f any successful wetlands preservation effort. Success or failure also hinge on cooperation and close coordination with others - state and federal government, neighboring jurisdictions, tribes, citizens' groups, and others.

This chapter discusses ways to administer a wetlands preservation program. It also describes the various cooperative relationships and partnerships that are beneficial to wetlands preservation.

Choosing a Program Administrator

Selecting a lead program administrator to facilitate the preservation program is important. This key role should be filled by a resource planner or other staff member with planning skills, because this person will be responsible for overseeing program activities, addressing problems that arise, and ensuring that program goals will be met. Without a designated lead, the pro gram may flounder and, consequently, goals and objectives may go unmet.

Implementing any new program will also entail administrative groundwork both within and beyond the jurisdiction. The program administrator will need to seek program approval from the local governing body, because explicit approval and backing by elected and administrative officials is essential for implementation. Memoranda of understanding or agreements with neighboring jurisdictions or with other departments within the jurisdiction may also be needed to facilitate coordination on parts or all of the program. Time and money can be saved by coordinating with other programs and identifying both overlaps and gaps. An open space program, for instance, could already be using acquisition tools and techniques that could be directed toward wetlands, or a parks department that already manages some wetlands could become the logical recipient of further custodial duties.

Working with Other Wetlands Programs

Several functions and activities conducted by local governments affect wetlands. These functions might include SEPA review, sub-division review, surface water management, drainage and grading control, floodplain management, land-use planning, open space planning, parks acquisition and maintenance, and technical services.

Establishing links between different programs that address or relate to wetlands protection is important. The players within the jurisdiction might include the assessor, parks department, re-source planning, real property, surface water management, or others. The goals and intents of the entities that carry out these functions may vary. To effectively protect wetlands, all programs addressing wetlands need to be closely coordinated - especially regarding wetlands preservation. Within the jurisdiction, all entities involved in the preservation program must participate in the coordinated program effort. This means that issues of coordination and provisions of general oversight and operation of the program must be worked, out. Modifications of previous business methods and some reallocation of resources may be required. New working relationships may need to be forged.

If watersheds cross political boundaries, the actions of one entity to protect its wetland resources could be undermined by the actions of another upstream. For this reason, coordination among local governments and neighboring governments, federal and state agencies (particularly those with technical knowledge or regulatory responsibilities), tribes, large businesses, property owners and other relevant parties is also important. Cooperative agreements, memoranda of understanding, and exchanges of technical information and assistance can all be used to better coordinate the activities of groups affecting local wetland resources.

Wetlands that contain unusually diverse habitats, sensitive animal or plant species and communities, or habitats suitable for sensitive, threatened, or endangered species should be brought to the attention of the appropriate state or federal wildlife agencies. These agencies may wish to purchase these lands or enter into cooperative actions with local government or environmental organizations.

Forming Partnerships

Through partnerships, distinct players agree to cooperate and work together. toward a common goal. In particular, partnerships provide for the sharing or pooling of expertise - a move that can conserve resources, streamline efforts, and provide political strength.

Partnerships may be either short term, arising in response to a specific need such as preservation of a particular wetland site (and, thus, dissolving when the needs are met), or they may be long term, beginning with a standing agreement that outlines the roles, responsibilities, contributions, and benefits for all involved parties. For long-term partnerships, memoranda of understanding or agreements are often appropriate.

Formalized partnerships are especially useful in coordination activities. These partnerships can cross political and jurisdictional boundaries, involving government and non-government entities to address improved resource protection needs. Identifying the areas of expertise that can be shared is the first step toward establishing a mutually beneficial partnership: Projects that are addressed should be limited to those in which the goals of both partners are compatible.

The potential for creative, mutually beneficial arrangements between land trusts and local government exists within most local jurisdictions. Land trusts are non-profit citizen organizations that have incorporated to preserve a community's open space values and that negotiate with landowners to secure important sites.

They are also effective at holding conservation easements, monitoring lands, and enforcing use restrictions. A More detailed discussion of land trusts is presented in this chapter's Feature, . "Land Trusts to the Rescue."

As partners with local government, land trusts can provide public support and negotiating skills for acquisitions. In turn, local government can supply information on specific sites and provide funding mechanisms. Before any partnership between a local land trust and a local government is considered, the land trust should be evaluated. The Land Trust Alliance (formerly the Land Trust Exchange) is a national organization dedicated to aiding the formation and operation of land trusts. Its booklet, *Statement of Land Trust Standards and Practices*, is designed to help land trusts build firm legal and ethical foundations of operation. Because the standards focus on ethics and legality, their adoption by a land trust can serve as a guide for determining whether that land trust will make a credible partner in land conservation.

If no local land trust exists, local governments can encourage the formation of one, educating conservation leaders about the benefits of land trusts, offering technical assistance, and, if possible, providing grants of seed money. With assistance from the state's Centennial Clean Water Fund Program, Snohomish County is currently working on such an effort with the newly formed Snohomish County Land Trust.

Yakima's Ambitious and Effective Land Trust

The Yakima Greenway Foundation is a good example of a mutually beneficial partnership between local government and private interests. At the request of the City of Yakima, the State of Washington studied the feasibility of developing a system of parks and wildlife areas along a section of the Yakima River in the mid-1 970s. While the State was developing an action plan to implement the recommendations of its study, many landowners and residents of the affected area pressed for control of the project. A task force appointed to study local implementation of the recommendations concluded that a private, non-profit land trust would be the best agent to acquire many of the necessary easements. Several members of the task force then formed the nucleus of what is now the Yakima Greenway Foundation.

The Foundation has two major roles in the Yakima River project: it raises matching funds for state and federal challenge grants, and it holds and monitors all donated easements. In its first fund-raising campaign, the Foundation raised over $500,000 in six months. This money was turned over to Yakima County to use for land purchases. Foundation officers feel that the private nature of their organization was an essential ingredient of their successful efforts to gather donations of cash and easements. Together, Yakima County and the Yakima Greenway Foundation have assembled a park and recreation system comprising over 3,600 contiguous acres along the Yakima River.

F E A T U R E

Land Trusts to the Rescue

Land trusts are private, non-profit corporations dedicated to the preservation of land for scenic, recreational, ecological, historical, or other non-commercial values. They are formed as grass-roots collaborations among citizen volunteers to preserve the natural amenities of a community.

Land trusts have a fairly long history in the eastern United States, but because intense development pressure is relatively new to the West, most land trusts in the Pacific Northwest are much younger. However, in the past few years; the number of land trusts in Washington has mushroomed. The majority of land trusts in Washington are on the west side of the state, within the Puget Sound basin. Two national organizations acting as land trusts with a presence in Washington State are The Nature Conservancy and The Trust for Public Land. These non-profit organizations function like local trusts but with a regional focus. A current list of land trusts in Washington is contained in Ecology Publication #90-5, *Wetlands Preservation: An Information and Action Guide*.

Most land trusts operate best at a local level, and experience has shown that they are ideally suited to preservation efforts at the scale of a county. These local land trusts protect land primarily through the donation of conservation easements (which are discussed in detail in Chapter 6). Older land trusts are often more experienced at raising capital for the outright purchase of land; younger ones may have only modest holdings.

Unique Attributes of Land Trusts

Classified as public charities, land trusts usually acquire their holdings through partial or full donations, which, in most in, stances, yield the same tax benefits to a donor as would a donation to a government agency. As a general rule, land trusts are more successful than government agencies at attracting donations, possibly because government agencies do not aggressively solicit them. There are many other attributes that make land trusts attractive to donors:

Goodwill plays a role, because many landowners who would insist on receiving their land's full market value from a government agency will often sell an equivalent interest to a land trust for a fraction of this price. Clearly, goodwill translates into a greater willingness to deal favorably with the land trust in owner ship transactions.

Faith in Long-Term Stewardship is also important. The public F may be concerned that the statements and promises of elected _ 1 officials may not be implemented over the long term. They may - also feel that policies, and management guidelines of public agencies are more subject to change than those of a land trust.

They may be more willing to assign the stewardship of their land to a land trust, whose stated purpose and contractual agreements bind it strongly to that cause.

Less Cumbersome Operational Processes give land `trusts an -advantage. Most government agencies operate under legal constraints, which can make acquisition cumbersome and time-consuming. More flexible and often more responsive, land trusts can acquire a piece of property in a fraction of the time required by government. For this reason, regional organizations like The Nature Conservancy, The Trust for Public Land, and other regional organizations with well-established financial assets are able to act as land brokers for government agencies. They can acquire property desired by the government agency at reduced cost and transfer it at full value, enabling them to reinvest the difference in other valued property.

Benefits and Limitations of Land Trusts

By nature, land trusts must solicit public involvement in conservation. They operate, at least partially, on private, locally generated funds, and they return the benefits of land conservation (habitat arid species protection, education, aesthetic value, and recreation opportunities)-directly to the people they get their support from. These direct tangible rewards help build a politically involved core of constituents - people with a, genuine knowledge of local conservation issues.

Land trusts can offer strong negotiating skills for acquisition. Members of land trusts learn right from the start how to work effectively with landowners to secure lands. Also, land trusts are supported by volunteers who are willing to disperse information; inventory, monitor, and restore natural areas; and provide other donated services to the preservation of desired lands.

A few limitations of land trusts should be noted. Land trusts are often led and staffed by a handful of energetic volunteers. If these individuals leave their roles, the land trust may be unable to fulfill certain responsibilities and may eventually fold. Lands acquired by a land trust should be protected against this contingency by reversionary clauses, which specify that a government agency working with the trust has agreed to take over any wetlands acquired, in the event that the land trust dissolves. To date, no land trusts in Washington State have dissolved.

Like most volunteer organizations, land trusts may be limited in their capacities. Faced with the scheduling constraints of a volunteer or part-time staff, a particular land trust may simply be incapable of handling preservation projects beyond a certain size or complexity.
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Key Points

▼ A program administrator should be identified to oversee the preservation program.

▼ Success of a preservation program depends on coordination with:
- Inter- and intragovernmental local public agencies
- Private citizen groups
- State and federal programs.

▼ Local land trusts can be effective partners for preservation because they provide:
- Community-based support
- Negotiation skills
- The ability to act quickly
- Opportunities for long-term stewardship.

Key References

Land Trust Exchange and Montana Land Alliance. 1982. *Private Options: Tools and Concepts for Land Trust Conservation.*

Hoose, P. M. 1981. *Building an Ark: Tools for the Preservation of Natural Diversity Through Land Protection.*

4 Chapter Selecting, Preservation Sites: Developing and Applying Criteria

Before deciding which wetlands to earmark for preservation, selection criteria that reflect program goals and objectives must be developed. Typically, these criteria consider functional attributes, site conditions, location, local community liabilities, and management issues pertaining to wetlands.

This chapter explains the site selection process, briefly describing the different areas for criteria development that are useful to preservation programs.
the different areas for

Chapter Four '

Types of Selection Criteria

A wide range of selection criteria can be used to identify wetlands for preservation. Categories to consider in developing criteria can be divided into two broad areas: ecological considerations and managerial and political considerations.

Ecological Considerations

Ecological considerations address the functional nature of wetland systems and incorporate provisions to preserve intact landscape features. Numerous methods have been developed arid used to assess different functions of wetlands. Although some focus only on specific wetlands, approached that include an evaluation of wetlands from a landscape perspective are preferable.

Gosselink and Lee (1987) have developed a relatively rapid means of assessment, in which the significance of a given wetland is established through indices of integrity. They describe several `~ indices, some site-specific and others on a watershed scale, that can be used to identify high-quality wetlands and wetlands that, through loss of functions, are at great risk. Some of these indices are presented here as examples of broader ecological concerns that can be applied, in conjunction with more site-specific functions and attributes, as criteria for wetlands preservation programs.

Wetland Loss - the relative abundance of existing wetlands compared with their abundance in the past. This index will help identify a landscape pattern for preservation that will most closely mimic the original one and pinpoint areas for preservation and restoration (if restoration is to be included as part of a comprehensive protection effort). Analysis of this information may also reveal the major causes of wetland loss, which, in turn, may help to identify sites that are at greatest risk, and therefore good targets for immediate action.

Distribution - the spatial arrangement of wetlands within a . , certain area. By analyzing the size and distribution of wetlands, information about functions (such as capacity to provide flood control, species diversity, and potential to support animals and plants at functionally viable population levels) can be inferred.

To some extent, an analysis of the distribution of wetlands requires an assessment of the surrounding landscape and the wetlands' contiguity with undisturbed upland habitat or open water. Size and distribution may also be used as indicators of resiliency. If a natural disaster affects one wetland, will other wetlands maintain the same functions in the watershed? Alternatively, the distribution and extent of hydrologic connectivity of wetlands can be used to assess the potential impacts of water quality degradation.

Contiguity - the extent that wetlands are connected with lakes, streams, other water bodies, or undisturbed upland habitats. The extent of contiguity is an indication of the availability of habitat for a variety of plant and animal species and the potential of the site to support minimum viable populations. Undisturbed upland or riparian corridors that connect wetlands promote the movements of plants or animals, fostering genetic diversity. Isolated wetlands that exist within a fragmented landscape tend to be more easily degraded by exotic or invasive plant species or decreased water quality.

Ecological Integrity - a measure of the overall health of the wetland system and its potential for long-term viability (retention on the landscape). The overall health of the wetland provides an indication of the extent to which it performs certain functions. To ' some extent, the ecological integrity of the wetland can be evaluated by the presence and extent of native plant communities in the wetland. Wetlands that have been unaffected by changes in water quality or quantity, the removal of vegetation, or other disturbances tend to support native plant communities. If adequately protected with an effective -buffer, these systems are likely to, persist over the long term.

A landscape perspective-is instrumental in evaluating the potential for controlling degradation of the wetland over the long-term. The location of the wetland, the feasibility of controlling both on and off-site impacts, and the adequacy of available buffers need to be included in that evaluation. Onsite impacts that should be assessed may range from introductions of exotic plant and animal species to the disposal of yard waste by neighboring landowners. Offsite impacts include the presence of highly invasive exotic plant species, extent of pollutant discharge into the wetland, rate of sedimentation, and alteration to the hydrologic source. Also, the availability and width of buffers to protect wetland functions is very important.

Size- a measure of the wetland's potential to support certain minimum viable populations of animal or plant species over the long term. Larger wetlands tend to be less subjected to the threats of invasive species and support greater genetic diversity. Larger wetlands also increase the area of wetland that provides biofiltration or groundwater exchange.

Hydrologic Functions - separate measures of a wetland's abilities to stabilize shorelines, control flooding, provide for groundwater exchange and support of downstream flows, and capture and assimilate sediments, nutrients, and pollutants.

Wetlands stabilize shorelines in areas that are subjected to prolonged wave action and winds or that are fronted by fast-moving water or currents. The degree of stabilization is determined by its relative location to a larger body of water, the prevailing winds, length of fetch, and density of vegetative cover.

Wetlands retard flood stages in a watershed. Indicators of the wetlands ability to perform this function include the residence time of water in the wetland, wetland size and storage capacity, and location within the watershed. These indicators provide a measure of how wetlands modify downstream flooding.

Wetlands also provide for groundwater exchange and support of downstream water flows. The export of nutrients to adjacent or downstream ecosystems is a function of the wetlands' type and its hydrologic connectivity with another water body. Intertidal wetlands or wetlands that are associated with perennial water bodies have increased potential for exporting nutrients. Groundwater exchange, whether recharge or discharge, is extremely difficult to determine without extensive hydrologic and geologic studies. Information on the extent to which the wetland is seasonally or permanently flooded, surface water source, and outlets is needed to determine the extent to which a wetland is performing this function.

The ability of wetlands to capture and assimilate sediments, nutrients, and pollutants is determined by the rate of water moving through the site in combination with wetland size, the density of vegetative cover, and the magnitude of pollution sources. Any change in the total nutrient or sediment load provides an indirect measure of the integrity of the wetland system. This change may be due to loss of wetlands or the inability of the existing wetlands to absorb excess nutrients from agricultural or urban runoff.

Biological Support Functions - measures of a wetland's ability to support life. These measures include the structure and diversity of habitat types, plant and animal species diversity, the presence of native communities, the presence of open water, the extent and type of buffers, connectivity with other water bodies, wetland size, and compatibility of surrounding land use. The presence of a full complement of native species or high concentrations of a single species can indicate a healthy, high-quality wetland.

Indicator species are animals or plants that, by their presence or absence, provide a measure of the integrity of the wetland's biota and the potential long-term viability of the wetlands. The presence of sensitive, threatened, or endangered species should be used as an indicator of the high relative importance of a wetland. Other indicator species that represent functioning trophic levels

within a community can be identified. These species will vary, depending on the wetland's ecological zone or the ecosystem of which it is a part.

In general, large animals with extensive home ranges and narrow niches (for example, carnivores) are indicators of landscape integrity. Smaller animals with narrow home ranges and specific habitat requirements are indicators of site integrity. Amphibians are particularly appropriate as site-specific indicators of wetland health, as are native wetland plants. Those wetlands with healthy native communities should be the targets for preservation.

Problems to Look For

Negative biological indicators may be used to identify wetlands that require restoration or that should be given low priority for preservation. They include non-native species, species with non-specific habitat requirements (broad niches), and species that can tolerate disturbed or degraded environments.

Large populations or extensive coverage by non-native plants (particularly non-eradicable varieties) is a serious problem. Eventually these species can replace the native vegetation of wetlands, totally changing functional attributes - particularly habitat value. Frequently found in Washington wetlands, three non-native plants that are hard to eradicate are reed canary grass, purple loosestrife, and spartina.

The degree of "recovery" needed to restore functioning of a wetland system should be considered carefully. Poorly functioning wetlands could be targeted for restoration efforts. If such efforts are successful, then the restored wetlands might be considered for inclusion in a preservation program. Systems that are degraded beyond the current technological capabilities of restoration, are too isolated to maintain their functions, or have been developed within the natural buffered edges, do not make good candidates for inclusion in a preservation system.

Managerial and Political Considerations

Managerial and political considerations allow local government to further identify wetlands that are best suited to preservation program needs:

Cultural Functions - attributes Such as recreation, education and interpretation, research, aesthetics or open space, and historical or archeological values. Assessment of wetlands for these functions includes consideration of the availability of public access, levels of current use, and balance with other functional attributes.

Locations of wetlands within high-priority basins or community planning areas can be used to narrow the list of candidate wetlands for preservation. The degree of threat to a wetland might be high because of a specific development proposal or because growth in the immediate vicinity has been occurring at a rapid rate. Particular watersheds or areas could become high-priority

areas because of the rate of development, political issues, particular open space needs, or other current events.

The degree of **Inter- and Intragovernmental** Coordination that will be required for a-project should be assessed. If coordination mechanisms do not already exist (as described in Chapter 3), and if there is a limited window of opportunity in which to act on a particular project, issues of extensive coordination may prevent that project from succeeding. Alternatively, additional levels of coordination - particularly between different jurisdictions - may make a project more effective, because there will be more agencies and divisions working to achieve the same goals.

Community Needs and Opportunities are also important criteria. If known, the wishes of the community should be factored into the selection process. A high degree of public interest in a particular site should be considered. If ,a site is acquired for recreation or education, the size of the community served should also be considered: Acquisition of this type of site should be consistent with the open space or recreation plans of the community, assuming these plans will not adversely affect ecosystem functions.

Public Access can be provided for education, recreation, research, and scenic opportunities. The degree of public access should be evaluated, both in terms of availability and desirability. For example, public access to a site with a sensitive plant or animal species or community will not be desirable. Limited access to protect sensitive features might be an option, particularly if the site is being used for educational or research purposes. Additional costs for preventing public access or for providing (and monitoring) some level of limited access should be factored into decisions between otherwise comparable sites. Conversely, if public access is desirable but not provided, then the costs for providing and maintaining that access will need to be considered.

Liabilities - Wetland sites should be assessed for-the presence of environmental and legal liabilities. As with any land purchase, wetland parcels should be investigated for the presence of underground storage tanks, toxic wastes, surface water management problems, -or other hazards. Because these kinds of hazards can be very expensive to correct, it is recommended that local government avoid acquiring any sites with these features. Before purchasing properties, a title search must be conducted. Unclear titles may be resolved, but the time and expense involved should be carefully evaluated.

Management Costs - Maintenance, monitoring, and enforcement of all lands acquired by local government requires money. The actual management costs will vary with each site, depending on the wetland's size, level of use, surrounding land use activities, and resource needs. Site "recovery" activities to correct limited impacts will incur additional expenses. In addition to the annual costs of ongoing activities, one-time costs may accompany the development of a management plan or the initiation of capital improvements. All of these management costs should be estimated and compared with the parcel's value to the preservation program. Over the long-term, the wetland should be more of an asset to the community than a liability.

Funding should also be considered. Conditions placed on the use of funds may determine which wetlands are selected at any given time. For example, some funds may only be available for the preservation of specific types of wetlands, such as salt marshes. Project selection may also depend on the amount of funding available. For example, if funding is relatively plentiful, fee-simple ownership (discussed in Chapter 9) may be feasible. If funding is not available, then a greater emphasis may need to be placed on soliciting donations.

Donations - There are a few considerations unique to donations As a general rule, selection criteria for accepting donations can be somewhat relaxed. However, all donations should be fully assessed to ensure that the project is a net asset rather than a liability. For example, donations should be investigated thoroughly for hidden environmental liabilities that may be providing the motive for the donation. Whether the donor's wishes are compatible with the jurisdictions plans for the wetland should also be considered. Because there are no up-front expenditures with a donated parcel, these lands are often mistakenly viewed as free. The cost of managing donated parcels should not be greater than the parcel's value to the preservation program.

Site Selection: A Four-Step Process

Selection criteria are applied at several points during wetland preservation. Initially they are applied as wetlands are inventoried and targeted for action (a -process described in Chapter 5); later they are used as wetlands are acquired (Chapters 6 and 7).

The specific type and number of criteria that are applied at any one time will vary. For example, during the development of an inventory, ecological criteria are applied. Those addressing the wetland's functions and ecological integrity will be key. During identification of target sites,

a second set of criteria including managerial and political considerations will be applied. After negotiating with the landowner, all the criteria should be applied to the site, weighing each according to its importance to program goals, and possibly making some on-the-ground reassessments of some (for example, site integrity and liabilities). Which particular criteria are applied at each step in the process is a matter of-choice. How they are applied for assessment is subject to the specific needs of the program.

Deciding what weight to assign each criterion is another issue, often involving cost-benefit considerations, liabilities associated with the site, and other complex issues. For example, will fairly high management costs for a particular wetland outweigh any benefits derived from its floodwater storage capacity? Difficult decisions and-trade-offs must often be made.

Different criteria may be applied under different circumstances. For example, criteria applied while making a land purchase may be more stringent than criteria applied while acquiring donated land.

Step 1: Develop and Apply the Criteria

Before selecting the appropriate criteria, several aspects of the program should be carefully examined. By looking at such things as goals and objectives, available or anticipated funds for implementation, involved parties, and any limitations, the operational boundaries of the program can be defined, clarifying which criteria will be most beneficial to the effort.

Not only the type, but the timing of criteria needs to be considered. Some criteria are best applied early, helping to narrow down the number of wetland sites that will be examined in more detail.

Using a Citizens' Advisory Committee

The advice of a citizens' advisory committee is useful throughout the site selection process. In particular, such committees can assist in the development of a selection criteria checklist and help weigh discrete criteria in accordance with community interests. Throughout the process, citizens' advisory committees can provide guidance about acquisition opportunities and make reassessments of acquisition interest. They can provide a direct conduit between the community and local government, which can help to legitimize preservation efforts.

A citizens' advisory committee should include members who are knowledgeable about natural resource issues - active or retired professionals in fields such as ecology, botany, zoology, hydrology, resource management, or parks and recreation. Their knowledge of the sensitivities of the wetlands resource will prove useful in balancing the ecological qualities of wetlands with other managerial and political considerations. An added benefit: a committee of this make-up could also be called on to advise the agency charged with managing pre- served sites.

From this smaller subset of -sites, additional criteria can be applied before making any final selections. Such a staggered application of criteria can save money and time. After all, it would be wasteful to collect the data needed to perform a "full assessment", of all, wetland sites, if, by applying a few criteria, many can be easily eliminated from consideration.

Essentially, the criteria establish a basis for focusing data collection questions, so that inventory and assessment result in the identification of desirable preservation sites. During development and application of the selection criteria, each local government may have its own protocols. Deciding what divisions are empowered to make acquisition decisions, determining when and how elected officials need to be involved, whether technical assistance is needed from outside sources - the answers to these and other questions will vary from one jurisdiction to the next.

Step 2: Inventory Potential Sites

In the selection process, an inventory, is used to evaluate wetlands for their preservation potential, based on the ecological attributes of the wetlands. Compiling the inventory involves **data collection and data assessment**.

During data collection, information about specific wetland
_ characteristics is gathered that can be used to answer a series of
questions. Among the most important wetland characteristics to address are the presence of desirable functional attributes and the ecological integrity (viability) of these sites. Ecological criteria
- selected for these characteristics will greatly influence the initial
assessment used to identify the highest quality sites for further consideration.

During **data assessment**, the gathered information is analyzed and correlated (and sometimes assigned scores), providing a measure of the degree that the characteristics are represented by the wetland. Quantitative and qualitative measures are used in an assessment methodology, which provides the basis for measuring how well any site meets the selection criteria. Assessment methods are program specific - that is, they are designed to provide the selection- results desired by the goals and objectives of the program.

As part of the inventory, data are collected for subsequent assessment and site identification. For example, in assessing wetlands for flood control, it is important to knew whether the wetland has a large storage capacity (determined by size and depth), is associated with another water body (especially a river or a stream), and is proportionately large in relationship to the overall stream drainage basin. Correlated as part of the assessment method, these pieces of data identify wetlands with high potential for flood control. To further identify those wetlands that perform

this function most effectively, additional data collection (for example, establishing monitoring gauges to make the finer assessment) may be required. .

Selection Criteria: A Matter of Choice

Program goals may direct the overall preservation of sites; however, it is the selection criteria that really direct the efforts to preserve individual sites. Having a clear image of the types of wetlands to be preserved helps determine which selection criteria will be chosen and how they will eventually be applied.

For example, the preservation goals of a jurisdiction may direct the protection of wetlands that provide for flood detention and attenuation as one of its ecological criteria. Instead of focusing on all wetlands within the jurisdiction, this criterion would focus on identifying wetlands that serve this function. If 50 wetlands within the jurisdiction provide this function, it might be necessary to choose other, more specific, ecological selection criteria - focusing instead on only those wetlands that store the most water during flood times or hold the water longest. The decision to select a specific site for preservation action would require that other ecological criteria (such as ecological integrity and potential long-term viability of the site) and, eventually, managerial and political criteria (such as an assessment of liabilities or management costs for the site) be applied.
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Some site selection criteria will require that data are collected in the field, while others will not. Application of the key ecological criteria (particularly functional attributes and site viability) are most critical during the field data collection phase. By using these screening criteria to identify wetlands with the highest potential for preservation, the breadth of sites for consideration within the jurisdiction can be narrowed. The application of additional managerial and political criteria or, in some instances, more in-depth assessments of certain functional attributes, is best conducted on this select group of wetland's with greatest potential for preservation.

Step 3: Target Sites for Immediate Action

Once the field inventory has been completed and the assessment methods to evaluate functional attributes applied, a "working list" of desired wetlands for preservation is available. Some prioritization-of this list will be necessary to identify "target sites" for immediate preservation (that is, within a given time frame, such as a year or biennium). By developing a list of target sites, available funding and program efforts can be focused wisely.

To narrow the full list of identified sites, earmarking certain wetlands for immediate action, more selection criteria must be applied. These criteria should reflect the remaining program priorities that have been identified earlier: for example, to first acquire the best, most threatened sites, or those with willing sellers or community support. Again, additional information may need to be

gathered and evaluated. However, unlike during field collection, this second phase of information gathering may be conducted in-house -reviewing records, inquiring through conversations, or making contacts. Evaluating and weighing this information may be done with a checklist or by using a second phase of the assessment methods. The criteria that are applied during this phase are the more transitory ones: such as, immediate political interest, impending environmental threats and managerial needs.

It is recommended that target sites not be prioritized numerically but, instead; be organized as a group of sites sharing equal interest to the program. (Refer to Chapter 7 for more detail) Grouping sites allows more negotiation flexibility with landowners, ensuring that prices are not inflated because the number one site on the list must be acquired before the number two site. However, because acquisitions usually proceed slowly, it is wise to divide the target sites into several categories. For example: Class A sites may meet all of the selection criteria; Class B sites may meet most of the criteria; and Class C sites may meet some select criteria. The program would actively pursue Class A sites first, but accept a Class B or C site if approached by a willing landowner. Once all Class A sites have been acquired or exhausted, the program would pursue Class B sites and, eventually, Class C sites.

A list of target wetlands might be tailored to particular drainage basins or community plan areas or developed for a particular budget cycle. The list should be updated annually or biennially, removing wetlands that have been successfully protected or are no longer under consideration, and adding new wetlands that have become desirable.

Selection, Step-by-Step

▼ Define selection criteria based on program goals:
- Determine how each criterion will be applied;
- Identify what information is key to determining whether each criterion is met.

▼ Apply ecological criteria to inventory potential sites:
- Develop data assessment methods to correlate and/or score information;
- Develop data collection and storage approaches;
- Collect data;
- Apply methods to assess data collected and select working list of sites.

▼ Apply additional managerial and political criteria to the working list to select a target list of sites.

▼ Make final decisions on acquisition in last review of all selection criteria.

Step 4: Negotiate and Make Final Decisions

Negotiating with the landowner and making the final decision to acquire a wetland site utilizes the selection criteria again. The process of securing a site may take many years, following the initial contact with the landowner. Also, during the negotiations, circumstances may change. For example, a landowner may change his or her bargaining position, no longer meeting the program goals. Should this happen, a reassessment is necessary before the acquisition can be finalized.

After negotiations and before making the final decision to acquire the land, it is important to confirm that the site still satisfies the selection criteria. It may also be necessary to balance the benefits of certain attributes against the detriments of others - weighing the criteria according to their relative significance in the decision-making process.

F E A T U R E

The Importance of Buffers

Buffers protect the wetland from disturbances and impacts in the surrounding area. Their effectiveness is directly related to the buffer's increased density, width, and permeability. The presence of an effective buffer contributes to the water quality, wildlife habitat value, and ability of the wetland to persist as a viable system over the long term. As surrounding land uses such as agriculture, timber harvesting, or urban development encroach on wetlands, the importance of an effective buffer increases.

Securing upland buffer areas around preserved wetlands is critical to protecting these sites from degradation. Determining an appropriate buffer size is, however, a difficult task. Such determinations should take into consideration the functions and values for which the wetland is being preserved and the maintenance needs of these attributes over time. Generally, the narrower the vegetated area adjacent to the wetland, the more susceptible the wetland will be to stress and disturbance. However, the necessary size of buffer will vary, depending on the wetland functions being preserved. For example, to effectively preserve wildlife habitat, it is important to consider how the wetland is used and-which species will use it. To protect wildlife habitat and maintain biodiversity, a buffer area that is much larger than for other functions may be needed.

Buffers currently required for regulatory purposes are much less than optimal for preserving wildlife habitat functions. They may also be less than optimal for the long-term protection of other functions as well. Acting alone, regulatory programs are insufficient to ensure adequate buffer protection. Preservation programs can play a vital role in offering quality protection of biodiversity for critical wildlife and plant community attributes.

Preservation programs should establish larger buffers to effectively protect wetlands systems over time. Success at achieving this end will be influenced by a number of variables, including the type and proximity of adjacent land uses, geographic location and topography of the site, the cost of adjacent uplands, and available funding.

Information on appropriate. buffer widths for the preservation of habitat functions is contained in *Buffer Needs of Wetland Wildlife*, a summary document prepared by the Washington Department of Wildlife's Habitat Management Division. Much of this information is contained in Ecology's report, *Wetland Buffers: Use and Effectiveness*, a technical summary of buffer research as it relates to the protection of various wetland functions and the application of buffer widths in regulatory programs for wetlands protection. The report's technical information is also valuable for developing appropriate buffers in non-regulatory programs for wetlands preservation.
Key Refer

Key Points

▼ Site selection criteria cover ecological and managerial/political categories.

▼ The site selection process includes the following components:
- Development and application of criteria
- - Inventory of potential sites
- Targeting sites for immediate action
- Negotiation and making final decisions on acquisitions.

▼ The presence of an effective buffer acts to protect the wetland from disturbances and contributes to the long-term persistence of the system.

Key References

Gosselink, J.G. and L.C. Lee. 1987. *Cumulative Impact Assessment in Bottomland Hardwood Forests.*

Washington State Department of Ecology. 1992. *Wetland Buffers: Use and Effectiveness.*

Chapter .5 Creating a Wetlands Inventory

A comprehensive wetlands inventory is a research effort designed to collect data on the presence, extent, condition, characteristics, and functions of wetlands within a defined region. Such an inventory is essential to document the status of the wetlands resource within a jurisdiction.

Within the context of preservation, a wetlands inventory a can be used to identify the most significant wetland areas within a jurisdiction as targets for acquisition efforts. Depending on the focus o f the inventory (that is, the type and level o f data collected), information obtained Beaver can also be used as a basis for management decisions improving the resource base through regulation, preservation, restoration, or other means.

Why an Inventory?

Inventories can be designed to provide varying levels of information about the wetlands. The most basic inventory contains information on the location, size, and type of wetlands. More extensive inventories can provide greater detail such as characterizations of wetland attributes or comprehensive assessments of wetland functions.

For preservation purposes, a wetland inventory should contain data on specific functions. Depending on the program focus, important data to collect include indices of hydrologic and biological functioning of the wetlands (that is, their significance in the landscape); cultural functions (such as aesthetic, educational, and recreational qualities); and ecological integrity (such as site condition and projected longevity, given the level of encroachment and impact). Without these data, selection of the most desirable wetlands for preservation is not possible.

The inventory process can be divided into several phases, including inventory planning; development of data collection standards, techniques, and data assessment methods; collection of field data; and analyses of data to identify specific sites. During inventory planning, it should be determined how information is to be used. This determination will direct the type and level of data to be gathered.

Standard Inventory Approach

The standard approach to conducting an inventory is to compile existing data from maps and aerial photos, followed by ground - truthing and additional data collection in the field and analysis of the collected data to produce a summary of attributes of the wetlands. Techniques for conducting wetlands field inventories are contained in Ecology publication #89-60*, A Guide to Conducting Wetland Inventories*. The following brief discussion of steps for conducting an inventory is intended to provide an overview within the context of a preservation program but not to replace the contents of the inventory guide.

For a wetlands inventory, the amount of data collected and the scope of the collection effort are both functions of time, available funds, and the goals of the program. As discussed in the previous chapter, the ideal inventory would include detailed information or every wetland within a jurisdiction. However, because this is not always feasible, a number of alternatives could be considered:

- A "phased" inventory could be conducted, with portions completed at different times or at increased levels of detail.

- Only the largest and most obviously diverse wetland areas could be inventoried,

- Only priority basins or portions of the jurisdiction could be inventoried.

- Existing inventory data, if available, could be used to flag potential wetlands within the jurisdiction for further assessment.

- Select criteria could be used to evaluate wetlands for inclusion in the program on a case-by-case basis.

Use of these alternative approaches, although less expensive than conducting a complete inventory, increases the risks of overlooking ecosystem interconnectedness and missing significant individual sites, Each alternative also has other limitations: for example, evaluating wetlands for inclusion on a case-by-case basis does not provide for the best use of public dollars. If initial cost precludes conducting a jurisdiction-wide inventory, it is best to conduct a phased inventory, in which the jurisdiction is systematically covered over a period of years.

If an inventory that was originally designed for regulatory purposes must be used, wetlands in the highest rating category should be considered as potential candidates for a general wetlands preservation focus. In such an application, it will be necessary to examine the criteria used to establish the rating categories for conformance with, preservation program goals. Wetlands within the next highest dating may be targeted for future inventory field assessment to determine their appropriateness for inclusion as well. It should be remembered that an inventory conducted to implement a regulatory wetlands protection program is unlikely to be comprehensive enough to distinguish highest quality wetlands sites for the range of potential functions that are desired. At some point, it will be necessary to assess the wetlands more thoroughly, with preservation goals in mind.

Inventory, Step-by-Step

An inventory of wetlands for preservation purposes is conducted insteps. Each furthers the final objective of site identification; however, given limited resources, there are several ways to complete these steps.

Step 1: Identify Information Needs and Ways to Satisfy Them

Information needs are governed by the selection criteria for the program. As mentioned previously, these selection criteria should reflect the limits and scope of the program. Their purpose is to facilitate identification of sites for preservation. Therefore, they will direct what data are collected during the inventory process. The two components of inventorying are data collection and data assessment. Data collection requires the development of data collection materials (such as standards and field forms), and data assessment requires the development of data assessment methods that can correlate data and also score or weigh the data.

At the time of inventory, if the jurisdiction has other wetlands protection needs (for example, the implementation of a new regulatory program or a local wetlands restoration effort), data collection activities can be coordinated for all programs at once.

To determine the extent of the inventory effort, some questions should be addressed. How much money is available to spend on inventory? What amount of the jurisdiction can be covered? Should a phased approach be selected? Should the inventory be coordinated with another inclusive or neighboring jurisdiction? What assessment methods will be used? If only target areas are to

Matching Detail to Program Needs

The level of detailed information collected in the initial field visit is largely a matter of choice. That is, the necessary level of detail will depend on the individual program's needs (as defined under Step 1 of the inventory process) and its approach to the inventory. For example, if actual acreage is unimportant, a program may find it more advantageous to sketch out wetland boundaries than to spend additional time firmly defining them. A quick characterization of the wetland could be in order, using various indicator attributes to point out the likelihood of certain functions. Or an in-depth function assessment may be performed, firmly establishing the presence and quality of specific features and functions of interest to the program.

Whatever the case, certain decisions must be made in advance. Before any additional fieldwork is done, it will be necessary to identify the functions of interest, the measures that will be used to determine whether a function is present, the kinds of data to be collected, and the assessment procedures that will be used.

be field checked, what signature features will be noted during the in-house review of aerial photographs? What data will be collected in the field, and how will data collection be accomplished? How will data be stored- hard copy maps or a computer-generated Geographic Information System (GIS)? Will sites acceptable for donation be distinguished from those that would be targeted for outright purchase? These are just some of the questions that must be answered during the development of the inventory design.

Tailoring an Inventory Approach

Several existing assessment methods and field forms can be applied to preservation inventory work. However, each has been designed with a specific focus, intended to achieve a specific set of program goals and objectives. These goals and objectives will differ from one jurisdiction to the next.

There are still ways to put these existing tools to good use. By selecting appropriate methods and field forms of other programs, and by modifying other methods and forms in a technically sound manner, an assessment can be custom-tailored to meet specific program needs.

Advice on suitable methodologies and programs is available from Ecology's Wetlands Section. Other helpful information is contained in the Ecology publication, A Guide to Conducting Wetland Inventories.

Step 2: Compile Existing Data

Compilation should begin with the National Wetlands Inventory (NWI) maps prepared by U.S. Fish and Wildlife Service. On these topographic maps, wetlands are identified using high-altitude aerial photography, and their locations and types are recorded at a scale of 1:24,000. Because of the small scale of aerial photography and the difficulty of interpreting through woody vegetative cover, not all wetlands are identified on the NWI maps. Overlaying the NWI maps with "hydric" soil map units from the Soil Conservation Service's soil survey maps gives a more complete picture. NWI maps tend to under-represent the actual extent of wetlands; hydric soils information tends to over-represent potential wetlands acreage.

During this step, information should be gathered from every possible source - including any local inventories and floodplain maps. Efforts should be focused not just on existing sources but also on soliciting information from local experts and community groups, such as the local Chapter of the Audubon Society, Sierra Club, or land trusts.

Step 3: Interpret Aerial Photography

Aerial photographs can be used to identify wetlands or their parts that haven't been mapped previously. Their interpretation can also be an important and time-saving way to target highly diverse wetland systems and key features of preservation interest. Information from this interpretation can help inventory staff focus on the best areas for field reconnaissance. For example, photographic representations can provide information about the system's size and type. In addition, the aerial interpretation can provide important data on land use and human impact - useful for assessing the condition of the wetland and, thus, its appropriateness for preservation.

Step 4: Compile Field Reconnaissance Maps

Field reconnaissance maps can be created by using a base of large-scale aerial photographs or orthophotos. Information from NWI and hydric soils maps, interpretation of aerial photos, and any other previous inventory information should be included on these base maps. 1n most cases the use of orthophotos is preferred. Because orthophotos are corrected for declination of the earth, they provide a more accurate base from which to apply data sets. Also, they overlay better with property boundary maps, making it easier to mesh resource information with property ownership. Large-scale aerial photos can be used if orthophotos are unavailable or if it is determined that the special features of orthophotos are not needed. The base snap should only be used for field reconnaissance purposes. Field information overlaid on the base map will eventually need to be redrawn in a format suitable for recordkeeping.

Step 5: Collect Data

Checking mapped data and gathering general information about the wetlands' character (and more specific data on their functional nature) will require the most time and staff. This work should be conducted by trained staff or consultants with wetlands knowledge and field expertise.

Info from Outer Space

Pictures from satellites? At the national level, satellite imagery is being used in place of aerial photography to identify locations of wetlands. There are several different types of satellite imagery, but the best known is "thematic mapping," or "TM." Satellite imagery can provide the most current and up-to-date information on the landscape, but it does have several drawbacks. Its scale is very small, which makes wetland identification difficult (resulting in omitted wetlands), it is not as easy to ascertain the human impacts to wetland systems, and it can be costly. Given these limitations, large-scale aerial photography is still the best approach for conducting on-the-ground field reconnaissance at the local level.

Field Inventory Information Sources

Completed Inventories:

- Washington Department of Natural Resources, Natural Heritage Program [List of significant wetlands containing quality native plant communities throughout portions of the state]
- Washington Department of Ecology, Wetlands Section. *Puget Sound Wetlands Preservation Program: Program Summary and 1990 Preservation List. Publication No. 90-60*. [initial list of Puget Sound high quality wetlands for preservation]
- Washington Department of Wildlife, Waterfowl Program.

Sources of Materials, Maps, and Other Information:

- National Wetlands Inventories (NWI)
  Available as hard copy maps or in digital form from:

  Washington Department of Ecology or
  Wetland Maps
  Mail Stop PV-11
  Olympia, WA 98504

  National Cartographic Center
  U.S. Geologic Survey
  507 National Center
  Reston, VA 22092

- Soil Conservation Service County Soil Survey
  Reports available for each county from the local soil conservation service offices.
- Aerial Photos, Orthophotos, USGS Topographic Maps
  Department of Natural Resources Map Sales
  Olympia, WA 98504

The most comprehensive and effective way to approach data collection is through field assessment of the entire jurisdiction. This is an especially effective tactic if the jurisdiction is also engaging in regulatory efforts (in which case, data for the preservation effort and the regulatory rating could be gathered simultaneously).

At times, a quicker or more economical approach may be necessary. Wetlands that have been identified through aerial photo interpretation arid that appear to meet the preservation program needs could become the targets for field assessment.

Fieldwork should begin with a quick review of the site to assess its desirability - gauging the quality of the functions, determining the level of human impact, and making an initial determination as to whether additional detailed information will be needed. A field review of the site may determine that the wetland is not a suitable candidate for the preservation program and, therefore, warrants no further field time. For sites that are desirable, a full site assessment should be completed.

Step 6: Record, Store, and Assess Information Collected During the Inventory

Data are of two types: mapped location information and field sheets with characteristic attributes. Once these data are collected, they need to be stored - either on maps, in files, in a computer database, or all three. How the data are to be used and by whom are the main considerations when deciding how data should be kept. Whatever approaches are used, it is necessary to transpose mapped information collected in the field into a final format and to complete final comments and data records on all - sites visited.

One popular method for storing and accessing landscape information is GIS. Usually, GIS is best used by local governments that intend to conduct comprehensive inventories of their entire jurisdictions for use in regulatory wetland or natural resource protection programs. Geographic database systems have significant up-front costs, but they can store large amounts of information in easily accessible formats and are easier to update with current information than hard copy maps. For jurisdictions intending to implement both regulatory and non-regulatory (preservation) programs, a geographic database system can be a great asset.

To determine what functional attributes are present in more than one wetland, several different sets of field data may need to be assessed. If such an assessment is to be quantitative, this step requires correlating the data sets and possibly scoring or weighing the data. For these activities, a statistical computer program may be needed. Once assessment methods are applied, those wetlands that meet program selection criteria for ecological integrity will be identified.

Step 7: Revisit the Site for Further Reconnaissance and Checking

Affected by natural forces, human impacts, and changes in ownership, characteristics of the landscape undergo continuous change. No matter how detailed an inventory is done, it will be necessary to revisit a site for further reconnaissance before it is acquired. This is the best time to collect detailed data for acquisition; for example, fully delineating the wetland boundaries and identifying adequate buffers to include in the acquisition. This recheck is particularly important if much time has passed since the initial inventory was conducted.

Narrowing the Preservation Working List

Once the inventory is completed and all data have been collected and analyzed, a pool of sites is identified that meet the program's selected ecological criteria.. This group of sites constitutes the "working list" - those wetlands that are desirable for preservation based on their physical resource characteristics. From this working list, a group of "target" sites can be selected and earmarked for immediate action.

Identifying target sites will require the application of additional selection criteria developed earlier in the program. This is where more transitory attributes within the managerial and political criteria come into consideration. For example, a working list may contain 50 ecologically desirable wetlands. However, in the coming biennium, a jurisdiction may only have funds to initially acquire five. Therefore, additional criteria must be applied to decide which sites to pursue. These criteria could include immediate threats of development, community interest to assist with certain sites, known liabilities, or management issues.

Applying this second level of criteria should be approached consistently across all listed sites. Additional information may be collected and assessed with a manual checklist, or a second phase of a computerized assessment could be conducted. Different criteria may be weighed with the assessment methods, evaluated by the program administrator, discussed in a citizens' advisory committee, or dealt with in an appropriate manner. Essentially, these criteria are likely to be more fluid, because the information on which they are based is more subject to change. As mentioned earlier, sites should not be prioritized numerically for acquisition.

F E A T U R E

Functions and Functional Viability of Wetlands

Wetlands serve many functions. However, these functions will vary, depending on the wetlands' position in the landscape, its soils and plants, water regime, adjacent land uses, and continuity with other wetlands. Even small wetlands may serve as valuable watering holes or seasonal breeding areas for wildlife. If an upland habitat is lost to development, some of the animals that lived there will no longer be able to survive, and the adjacent wetland will lose some of its function. At the same time, the wetland may gain value in the eyes of the community; residents of the development may cherish the open space it provides and the opportunities for viewing the birds it still attracts.

The long-term functional viability of a wetland depends on its ecological integrity and its interconnectedness with other parts of the watershed. If maintaining natural systems is a preservation program goal, then integrity and interconnectedness will play a crucial role.

Ecological integrity is a measure of the overall health of the wetland system and its ability to persist over time without degradation or loss of functions and quality. For example, does the wetland support native plants and animals, as opposed to introduced communities? Has the hydrology been compromised? Is the wetland an isolated "island" surrounded by dense development? Size and structural diversity of a wetland may be instrumental to its integrity.

Interconnectedness is the functional relationships among ecosystem components. It is also considered part of a wetland's integrity, but is mentioned separately because of its importance to wetlands preservation. Wetlands are just one element of a landscape, and all landscape elements are required to maintain a natural ecosystem. It is important to identify the relationship of a particular wetland to the larger system of which it is a part. Is the target wetland-part of a larger body of water? If so, what kind of protection is given to it? What land-use activities or habitat types surround the wetland? Are there functional corridors for wildlife between wetlands? What is the quality of the water, both surface and subsurface, that flows through the wetland?

The factors that influence ecological integrity and interconnected-ness are the presence and adequacy of buffers, cumulative impacts over time, and position in the landscape. Buffers protect wetlands from the potentially detrimental effects of surrounding land uses, and also provide continuity with the surrounding uplands.

Degradation or loss of wetlands have cumulative impacts on the larger ecosystem. Each wetland, no matter how small, is a link in an interconnected ecosystem. The loss of a small wetland may not have a significantly adverse impact on that system, but cumulative loses of small wetlands over time will have an impact greater than would be expected from an acre-by-acre tally: If losses are widespread, even the areas that are preserved may cease to function. A strong preservation program should strive to reduce these cumulative impacts.

Key Points

▼ Creating a wetland inventory is a research effort, with data collected the presence, extent, condition, characteristics, functions of wetlands within a specific region.

▼ The level of detail and scope of information collected in the inventory should be sufficient to satisfy site selection criteria, thus meeting program goals and objectives.

▼ The inventory approach involves the following steps:

- Identify information needs
- Develop an inventory strategy with data collection forms and data assessment methods
- Compile existing information - Interpret aerial photography
- Compile field reconnaissance maps
- Collect data in the field
- Record and store inventory information
- Apply the assessment method for site selection
- Conduct further reconnaissance as necessary

▼ The inventory process results in a working list of wetlands with desirable ecological attributes for preservation. By applying managerial and political criteria, a list of target sites for immediate action can be developed.

Key References

Cowardin, L.M., V. Carter, F.G. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, Washington, D.C.

Washington Department of Ecology. 1990. *A Guide to Conducting Wetlands Inventories*.

Chapter 6
Exploring Acquisition Alternatives

Once certain wetlands have been identified for preservation, the process of acquiring these sites can begin. The first step is to determine what level o f ownership is required to assure adequate protection. If it is necessary to purchase the land outright, then financial resources must be available. If such resources are unavailable, then some alternative form of acquisition must be pursued. Even with an assured funding source, it may not be desirable under all circumstances to purchase certain properties outright.

This chapter examines the issue of full ownership versus partial ownership. It presents alternatives for each form o f acquisition and offers suggestions for determining which options are best suited for various preservation plans and budgets.

Full versus Partial Ownership

Protecting wetland functions may require gaining full or partial ownership of the wetland and its buffer. Outright (in-fee or fee-simple) ownership confers the highest degree of control over the land and its uses. However, holding partial (less-than-fee) interest rather than full interest is often sufficient to preserve desired functions and may be preferred for economic and political reasons.

Both forms of ownership interest can be used in protecting wetlands. Methods for acquiring ownership interest are described in the following sections. The nature of individual land transactions may vary, depending on resource characteristics and needs, available funds, the landowner's desires and willingness to negotiate, and local government's priorities.

Fee-Simple Ownership

Fee-simple ownership of a wetland and its buffer (either through purchase or donation) is straightforward and confers the greatest assurance of preservation. It also ensures the greatest flexibility and potential for public benefit. Retaining fee simple ownership is usually desirable when the land will serve several public functions -for example, if the wetland contains a federally threatened or endangered species or provides public access to a park, nature education area, or fishing and hunting area.

Less-than-fee ownership refers to the holding of one or some of. the rights associated with a parcel of land. These include uses such as mineral rights, development rights, and timber harvesting rights. Sometimes the cost of fee-simple ownership is only slightly more than the cost of less-than-fee ownership, making it advantageous to pay slightly more to gain management control of the land. In other cases, the fee-simple cost might be significantly higher. However, there are several disadvantages to fee-simple ownership. It removes the property from the tax rolls (thereby increasing the property tax burden on the remaining properties) and can generate additional expense in the form of maintenance. Some landowners may be unwilling to sell, because they are unwilling to move. It may also be desirable to preserve the existing use of the land. Life estate purchase and purchase with leaseback (discussed later in the chapter) are ways of overcoming these last two disadvantages.

The Hidden Costs of Partial Ownership

It takes money to purchase a wetland. However, there are also costs associated with not obtaining fee-simple ownership of a wetland. Full ownership confers complete management control over a wetland.

Thus, the possibility of litigation or costly restoration actions due to violations of conservation easement terms can be avoided. Term violations carry other costs - indirect, non-recoverable losses of such amenities as open space and wildlife diversity - which are all-too-often borne by the public.

It is not always necessary to retain full ownership of all lands purchased or received by donation. Fee-simple acquisition can be a useful temporary maneuver to gain control of a parcel in order to pursue other long-term conservation goals. For example, if a landowner refuses to grant a deed restriction but is willing to sell land in-fee, the local government could buy the parcel, place appropriate restrictions on the deed, and then resell it. The disadvantage to this approach is that, in some instances, deed restrictions may lower the market value of the property. Should this happen, a lower income will be generated from the sale of the property, resulting in a possible decrease in the tax base for local government.

Less-Than-Fee Ownership

Less-than-fee ownership commonly takes the form of a conservation easement, but there are other forms- as well. Conservation easements are recorded on- the property deed and may include restrictions on development rights while allowing activities suited to conserving the natural features of the site. Responsibility for enforcing the conditions of a conservation easement is conferred to a designated "holder," whose role is to monitor the property and enforce the restrictions for the term of the easement (which is usually granted in perpetuity).

Obtaining conservation easements should play a. major role in any wetlands preservation program. Acquiring a conservation easement is the preferred option if the goal is simply to ensure maintenance of an existing use. If a, local government is seeking fee-simple ownership, but the owner does not wish to sell, a conservation easement coupled with a right of first refusal (described later in this chapter) may be adequate to preserve the resource.

Donations of conservation easements should be solicited whenever appropriate. However, because there are costs associated with holding and monitoring easements, easements that are donated might not be acceptable unless the wetland meets the criteria for preservation.

There are several advantages to retaining less-than-fee interest in a wetland. Acquisition costs are lower, the owner remains responsible for liability and maintenance, the land may continue to generate tax revenues, and existing uses that are desired and compatible with wetland preservation may continue. In addition, landowners who are reluctant to relocate are allowed to live on the site, which may remove a potential obstacle to a mutually satisfactory agreement.

Pricing a Conservation Easement

The monetary value of a conservation easement is the difference in property values before and after the easement is granted, or some other, mutually agreed-upon amount. With an easement in place, the value of a parcel is determined largely by what can be done with the unrestricted portion of that parcel.

In many urbanizing areas, the greater part of a parcel's monetary value may lie in its speculative development potential - not in its existing use. To the extent that a less-than-fee interest limits development, the market value of a parcel is often reduced.

In extremely high growth areas, there may be a market for moderate- sized parcels of land (generally under 10 acres) that contain dedicated open space. Even in urbanizing areas, the difference in market value between restricted and non-restricted land may be atypically low, depending on the site. In such instances, the appraised value of the easement will be a small percentage of the total value of the property.

The monetary incentive to sell an easement may not be attractive enough to elicit a sale. If the real estate market is exceptionally strong, the opposite may also be true. However, it is possible that landowners might sell conservation easements to local government as a way to make their land more attractive to potential buyers. In some cases, the King County Assessor's Office has identified that the value of the property and that of neighboring parcels will increase, because of the protection of open space through a conservation easement.

The main disadvantage of conservation easements is that their terms may be violated with relative ease by the landowner. Therefore, in order for conservation easements to be viable, long-term investments, they must be diligently monitored and enforced. Monitoring and enforcement require commitments of staff time and the political will to take violators to court. An adequate monitoring and enforcement program requires a financial commitment by local government..

Exploring Acquisition Options

Acquisition transactions can take the form of either purchases or donations. It is important that the local government be clear about the goals and objectives that guide acquisition choices. In-fee donations should be accepted only if the wetland is desirable for a long-term preservation commitment or if the donor agrees to let the land be sold after a conservation easement has been placed on it.
Turning down the donation of a wetland that does not meet criteria may be undesirable-because of risks of future impacts to the wetland and the potential for diminishing citizen participation in the program, should other landowners think the government is not interested. An alternative is to

accept the donated wetland with the caveat that it can be resold. A conservation easement could then be placed on the land. The -land could later be sold and the proceeds used to purchase a higher-quality site. It is important that the donor be informed up front that this is the intent.

The relative importance of donations to a- local preservation program is difficult to predict. As discussed in Chapter Three's section on land trusts, it is generally agreed that people do not donate land to government agencies as frequently as they do to private organizations. Donations could play a more important role if they were actively solicited by local government. Recommendations on soliciting donations are discussed in Chapters 7 and 9.

The following acquisition methods may be used by local government. Costs involved will vary on a case-by-case basis; influenced by such factors as real estate values in the jurisdiction, the portion of full market value that is being paid; and the amount of time spent in negotiations. Local governments should be alert to bargains and offers of donations. By working with willing sellers who are concerned about resource protection, it may often be possible to acquire properties for less than full market value. Creative use of acquisition options can help funds go farther than they would if the only option considered is to purchase land at full market value.

Purchase at full market value is the most straightforward, albeit expensive method of acquiring interest in a parcel. Payment of full market value is the best choice if the seller will not accept anything less than full market value; it is desirable to conclude a transaction rapidly; legal restrictions requiring a full market value offer have been placed on the funding source; or the difference in cost between fee-simple and less-than-fee ownership is minor, given the public benefit of securing management control.

In a **life estate purchase**, the owner, sells the property, but reserves some of the rights and responsibilities of ownership for some portion of it. The ownership interest retained by the original landowner is called the "remainder interest." When the life tenant (the owner or some designated member of the family) dies, complete ownership of the parcel passes to the buyer. This allows the landowner to enjoy the land while transferring future ownership to the buyer.

Donations of a life estate offer several attractive tax advantages to the original landowner. The local government also gains the advantage of being able to work with property owners who want to remain on their land but also wish to protect the natural features.

There are some disadvantages to life estate purchases as well. Implementation of some of the local government's plans for a parcel will follow an uncertain schedule, because the date of a~ person's death is not predictable. Unless ownership can be clearly defined, abuses by the tenant landowner are possible. For these reasons, purchase and lease-back agreements are usually preferred.

The concept of **purchase and lease-back agreements** is similar to the life estate transaction, in that both allow sellers to continue to occupy the land after the transfer in ownership has been made: In a lease-back agreement, conditions on land-use activities are established, and the seller is allowed to occupy the land until retirement or some other fixed date. The fixed term of occupation allows the local government to develop schedules for its plans.

In a **bargain sale**, the owner agrees to sell interest in a property for less than its market value. Thus, the transaction is part purchase and part donation, carrying advantages for both buyer and seller. The local government is able to purchase important wetlands for less than market value, and the capital gains tax is reduced for the seller. If the buyer is a public charity (such as a land trust) or a government agency, the value of .the donation -that is, the difference between selling price and fair market value - may be deductible from the owner's taxable income.

Options and rights of first refusal are similar. In both, the potential buyer pays a landowner a small fraction of the market value in exchange for the right to buy the land later. With an option; the potential buyer has the right to buy the property at any time within a specified time period for a predetermined price. A right of first refusal grants local government the right to buy the land by matching any offer, should the owner ever decide to sell., Both of these options give the local government additional time to raise the funds needed to purchase the wetland. Rights of first refusal may be attractive to landowners who are not interested in selling immediately, but who might be within the time limits of the funding source.

Conservation easements and straight deed restrictions limit the uses or rights of the land. They are recorded with the title to the property and thus run with the land.

Conservation easements are contractual agreements between a landowner and a local government (or any other legal entity) that restrict the landowner's rights to develop or disturb a designated parcel in the interest of protecting it's natural features. A copy is held by the holder or grantee, who may be an agency, land trust, or other tax-exempt entity, responsible for enforcing the terms of the easement. **Straight deed restrictions** are similar, only they lack a holder or grantee to enforce the conditions and are, therefore, less desirable for assuring long term protection.

The easements pass with ownership transferal and are binding on future owners within the time limit of the easement. Generally, local governments will want to pursue conservation easements that will permanently preserve an area. Therefore, such contracts should not be subject to any time limitations. If a landowner, will not agree to a permanent easement, then finite, renewable terms (backed up with a right of first refusal) might be an acceptable alternative for the local preservation program.

Because conservation easements usually do not affect existing land uses, landowners who do not wish to develop their land have little to lose under these terms. However, when landowners grant easements, their potential for gain can be quite high. If the value of the land is reduced, property, inheritance, and other value-dependent taxes are also reduced. In most urbanizing areas, the property tax reduction can be significant. When a permanent easement is donated to a qualified government agency or public charity, the value of the easement can often be deducted from taxable income. These potential benefits can be explained to potential donors and sellers as a way to solicit donations and aid in negotiations. Local governments should not attempt to estimate federal tax benefits for donors (See Chapter 7).

The actual accrued property tax benefits to the donors of conservation easements must be decided on a case-by-case basis by a property tax assessor. In instances where the monetary value of a conservation easement is atypically low, the property tax benefits will be equally small or may not become evident for several years. In that case, the local government may have to pay more than the appraised value for a particular easement to achieve their resource protection goals. This situation is most likely to arise in urbanized areas, where undeveloped land is at a premium and rapid growth is occurring.

Mandated property tax reductions for lands affected by conservation easements or enrolled in Current Use Taxation programs (discussed in Chapter 9) may offer sufficient incentives for owners to grant easements. Specific recommendations for tax reductions should be, developed in consultation with the County Assessor and Prosecutor.

F E A T U R E

Liability and Risk Management

Whether a public agency, a private organization such as a land trust, or an individual property owner, no landowner is immune to the threat of lawsuits. Steps can be taken to understand and control liability risks using a "risk assessment and management" program. This approach-can be useful to identify and minimize risks. Further, with thorough risk assessment and management, land protection agencies and organizations can provide shelter to their assets, protecting them from loss if a lawsuit occurs.

Lawsuits can be instigated for a variety of reasons, including injury to a visitor while walking on an unmarked trail, damage to neighboring property as a result of an uncontrolled campfire, or the presence of toxic wastes on the site. They can be instigated for real or perceived losses or damages, and even if a landowner wins a case, certain assets may be threatened by the high litigation costs. In general, the more rights of the property that are directly owned or managed, the higher the risk to the landowner. General risk categories include bodily injury, property damage, personal injury of other kinds, contract and trust violations, and violation of other laws.

Liability assessment should begin with a thorough analysis of landowner liability under state and federal law. Section 4.24.210 of the Revised Code of Washington (RCW) addresses the liability of owners for injury to recreational users and is designed to encourage public access to land by limiting the liability of the landowner. Other laws that address landowner liability include RCW 4.24.040, which addresses the action of negligently permitting fire to spread; RCW 70.105D.040, hazardous waste; and RCW 67.32.130, which limits public agency liability for volunteers working on recreational trails. Although these sections of the RCW do not provide full coverage or protection, they can offer some significant reductions of risk.

The federal *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA) of 1980 also applies. Under CERCLA, all past and present owners and managers of property containing hazardous substances can be held liable for cleanup costs and natural resource damages. These costs can often exceed the value of the property.

Risk management can be undertaken as a series of steps. First, the preservation program should assign one person the task of risk assessment and management. Then, each property should be thoroughly evaluated to identify all actual hazards. This' evaluation includes carefully examining the land and all records associated with it and documenting the condition of the property. Next, an assessment of possible uses of the land should be undertaken, to understand potential liability problems. If possible, all hazards should either be eliminated or reduced; otherwise, they should

be adequately marked. Prohibited activities should be posted. Personnel should be educated and trained to minimize risks, and the property should be monitored on a regular basis. Lastly, the landowner should obtain adequate insurance to cover any costs that would be incurred if damages or lawsuits occur.

Many local governments may already have good insurance plans, but these plans should be analyzed to make sure that they include coverage of specific risks related to the management and ownership of land. Several methods of coverage might be pursued: joint ownership coverage with another insured party, such as a land trust; insurance pooling where members of the pool receive competitive "umbrella" coverage; agreements to indemnify (hold harmless) or insure landowners to obtain public access on their land; and, self-insurance, by creating a contingency fund to cover potential losses:

The best defense in a liability case is the exercising of "due care." An adequate risk assessment and management program is the best defense for local governments that are active in wetlands preservation,

Key Points

▼ To acquire wetlands, a variety Of protection approaches should be used.

▼ Although fee-simple ownership, either through purchase or donation, provides the strongest protection over the long term, other preservation methods are necessary to accommodate landowner needs and limited financial resources.

▼ Preservation options include:
- Purchase at full market value - Life estate purchase
- Purchase and lease-back agreements - Bargain sales
- Options and rights of first refusal
- Conservation easements.

▼ On secured properties, liability can be reduced by applying a risk assessment and management plan.

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Chapter 7
Acquiring Wetland Areas

Each year, local governments should pursue a number of wetlands for acquisition. To promote competition and improve the chances of obtaining a fair market price, the number of targeted wetlands should be greater than .any one local government can reasonably expect to acquire. For the same reasons, it is not a good idea to prioritize the list.

The acquisition process consists of assigning responsibilities and roles to the appropriate departments within the jurisdiction, conducting jurisdiction, conducting pre-negotiations and final negotiations, soliciting donations and public support; and conducting follow-up site evaluations to determine boundaries, changes to site characteristics, buffer sizes, and potential on-site and off-site impacts. Each of these actions is discussed in this chapter.

Pre-Negotiating for Wetland Properties

Owners of desired wetlands should be notified of the local government's interest in their property as early as possible. They should be approached in a non-pressuring manner and informed of the preservation program's focus and the desirable qualities of their land. Materials describing wetlands functions and values; the benefits of making land donations, and preservation options (as well as a flow chart to help guide the decision-making process) should be discussed and left with the landowner. Educational literature is available from Ecology, The Trust, for Public Land, local land trusts, and several other sources. It may also be prepared by local government, specifically for their preservation programs.

Early contact can be made in a number of different ways. The contact person can be a staff person from the local government, a land trust representative, or a local citizen volunteer. If a staff person is used, a professional land agent from the local government is the best choice. Alternatively, a representative from a land trust brings skills and experience to land negotiations and, as a partner, can lend more credibility to the government program. Training citizen volunteers is another way to spread the word about wetlands preservation to targeted landowners or to solicit donations from the public at large. Other creative approaches can be used during negotiations. Regardless of which approach is used, it is important to ensure that the first person to contact the landowner is fully- knowledgeable about preservation alternatives and will present a nonthreatening, trustworthy Image of the program.

Landowners should be recontacted regularly to reassert the value ° of the wetlands and gauge landowner interest in negotiations. Alternatively, it could be made clear that interested landowners are to contact the local government with offers to sell within specific time periods.

Conducting Pre-Negotiation Site Assessment

Once a landowner and local government have both expressed an interest in pursuing an acquisition, the site should be evaluated in more detail. Even if information about wetland functions is available from the initial inventory, a site visit will still be required to collect further data - for example, to delineate the exact wetlands boundary and buffer areas, identify any unknown impacts to the wetlands, and record any other relevant biological or physical characteristics that may not have been gathered earlier. Depending on the specific program selection criteria, there may be other information needs as well. Baseline data on the functions and condition of the wetland can be used for later monitoring and management of the acquired site.

When preserving a wetland, it is essential that the entire system be secured, including an adequate buffer area to keep the system protected from surrounding impacts. The wetland boundary should be clearly delineated. It is unlikely that any single parcel will encompass the entire wetland; therefore, it may be necessary to evaluate the significance of the proposed parcel, the level of threat to the rest of the wetland, and the possibility of preserving the remainder. Sometimes one landowner may own the entire system and its surrounding uplands: In either case, for the purposes of land negotiation and management, it is necessary to know the wetland's boundaries and include an adequate protective buffer area.

The pre-negotiation site assessment should be conducted by staff responsible for long range planning,. parks planning and maintenance, or resource planning. They should have wetlands assessment skills or be accompanied by someone who does. The landowner should also be present. The first site visit should be used to get acquainted with the owner, to generally reassess conditions of the site following the original inventory, and to discuss the preservation options that local government and the landowner might want to pursue.

If the site appears to be recently disturbed or if further data need to be collected, a follow-up visit to thoroughly assess the wetland should occur. In either event, the site will need to be assessed for its continued viability for long term protection under the, wetlands preservation program. If the land does not meet the selection criteria for the wetlands preservation program, the landowner could be invited to donate it to the local government, which can then resell it.

Although protocols will vary between local governments, the support and approval of the elected legislative body will generally be required for acquisitions. The agency responsible for the long -term maintenance should also be involved in all decisions, including evaluations and negotiations. Approval might also be required before negotiations begin, although such approval might be received once a year for the entire list of targeted wetlands. For these reasons, it may be advantageous to invite the elected officials of the district in which the wetland is located to meet the landowner and see the sits being considered for preservation.

Negotiations Leading to Acquisition

If the wetland is found to be a good candidate for inclusion in the preservation program, or if the owner agrees to donate the land for sale or swap, negotiations should proceed: In the case of donations or bargain sales, the landowner should be made aware of the value of retaining expert tax advice. The details of a transaction will depend on the preferences of both local government

and the landowner. If the parties have different ownership transfer needs, then combinations of transaction methods can be used to resolve disparities.

The division responsible for real .property acquisitions within the jurisdiction could conduct the negotiations. In cases where there is no acquisition division, negotiations could be conducted by the responsible party from the parks department, planning department, community land trust, or other entity identified in the program plan.

The first step is to identify the landowner's needs. What financial issues will affect the negotiations? Are tax breaks a consideration? Does the landowner wish to remain on the land? What family considerations affect the transaction? By clearly identifying the landowner's needs, options for securing the site can be narrowed. It is essential during this stage of the process to gain the landowner's trust. Gaining trust will lead to honest and open negotiations, during which both parties can clearly define their needs and work cooperatively toward an acceptable solution.

After both parties have agreed that a transfer in ownership is desirable, a title search should be ordered. This search may begin prior to or during negotiations: However, in practical terms, the sooner that the title search information becomes available, the more useful it will be to negotiators.

If the title is clear or relatively unencumbered, and the landowner expresses a desire to continue negotiations, then it is time to have the property-appraised. For small and simple purchases, an appraiser from the local government could be used. An independent appraiser should be hired for any large or unusual purchases, for potential donations, or if requested by a landowner. The Internal Revenue Service (IRS) requires independent appraisals of donated property whenever a donor claims an income tax deduction for the contribution. By paying for this required independent appraisal, local government can make donations more appealing to landowners. An appraisal is not always essential for conservation easement donations. It should be bypassed when the property owner is not interested or would not benefit from a tax reduction.

The appraisal value becomes the final piece of information around which details of the land transfer are developed. At this point, negotiations will focus on finer issues of importance to the parties - clarifying points of land management, on-site residence, or other parameters. This is the final opportunity for the local government to obtain its desired end result. If some parameters or conditions of the transaction do not fit the needs of local government for effective preservation

of the site, the negotiations should be terminated. If the negotiations are successful, they are usually approved by the elected legislative body before transactions are finalized.

If at any point in the process the landowner decides not to sell or donate the property, the local government should officially withdraw all standing offers in writing. This will help protect the local government from having to make good on an offer that was assumed to be no longer in effect. It does not imply that negotiations cannot be resumed at some future date.

Taking Ownership

Once the negotiations are over and the final transaction is complete, the original documents showing the government's ownership interest should be held by the custodial agency. If the ownership is fee-simple, the deed itself is held. If it is a conservation easement. that is held by the local government, the deed restriction-contract should be recorded by the agency ordinarily responsible for recording easements. For example, in King County, the divisions that can hold deeds include parks, real property, and -public works. In smaller local governments, the county clerk or the records department might be appropriate deed holders.

If the local government prefers less-than-fee ownership but the owner prefers a fee-simple transaction, the local government could buy the property in fee, restrict the deed with a conservation easement, and then resell the restricted use property. The conservation easement could also be held by the jurisdiction. The deed should be annotated to indicate that proceeds from the sale of the land are to be used specifically for wetlands preservation activities.

Copies of all conservation easements acquired by a local government should be forwarded to both the local assessor's office and the custodial agency. A copy of the conservation easement and a specific request for a reevaluation must be submitted to the assessor's office before property values can be reassessed. Because property values are not reassessed out-of-cycle (more than once every predetermined number of years), unless specifically requested, the custodial agency should make that request to the assessor's office. The property tax assessment should then be brought up-to-date. Because many jurisdictions have cut-off dates for reassessment, the landowner should be notified when to expect a change in the assessment level. If the number of steps and any paperwork are kept to a minimum, landowners may be more inclined to sell or donate easements. Development of management plans for secured sites is discussed in detail in Chapter 8.

Addressing Lands Not Suited for Preservation

Occasionally a landowner may consent to sell a suitable parcel on the condition that the local government buy another, unsuitable one. In other instances, a landowner may be interested in donating land that the program has deemed unsuitable.

A local government can benefit from acquiring lands unsuitable for its preservation program. Interest in such unsuitable land could either be sold to generate capital for more appropriate acquisitions or exchanged for land that fits the preservation criteria. Acceptance should be based on the land's monetary value, its marketability, and the compatibility of the owner's wishes with the community plan for the area: To avoid any misunderstanding, the ultimate fate of such lands should be detailed in writing and agreed upon by the landowner before the transaction is finalized.

Whenever unsuitable property is obtained by local government, the deed should be annotated to indicate that it is to be traded for more suitable wetlands or sold to generate money for wetlands preservation activities. If the property is to be traded, a copy of its deed should be kept in a separate "wetlands bank" file. As previously stated, if the property is sold, the proceeds from its sale should be placed in an account for wetlands preservation. Regardless of whether a parcel meets program criteria, if an ecologically intact wetland is present, it is wise to protect it with a conservation easement before it is traded or resold.

Properties donated for sale or trade may bear stipulations that the proceeds be used to acquire wetlands within a particular geographical area. With such properties, a deed annotation should reflect this restriction. Use of the funds could be restricted to a specific community, watershed, basin, or other clearly defined area. In these instances, it may be necessary to set up separate accounts to avoid mixing funds.

If a wetland does not have characteristics that qualify it for inclusion in the local wetlands preservation program, neighborhood action groups or regional "adopt-a-wetland" programs could be notified. These groups can provide some protection to wetlands without necessarily acquiring an ownership interest in them. Public awareness and education programs may also result in more responsible stewardship of wetlands by landowners and neighbors, without necessitating acquisition by government _ agencies or private organizations. The role of local government in organizing volunteer groups or public awareness campaigns is described in Chapter 7 0.

Soliciting Donations of Wetlands

For some programs, a wider range of donated wetland types and values might be accepted than those of wetlands to be purchased in whole or in part by the local government. To encourage donations, a clear, facilitated, and expeditious process should be laid out by the jurisdiction to assist landowners. One good approach would be to conduct a public awareness campaign about the procedures and benefits of donating properties to the preservation program. Other ways to encourage donations include:

Making It Easy to Donate Land. The procedure for donating should be publicized, at a minimum, by listing the numbers of appropriate local government personnel in the government pages of the. telephone directory. Local government should also produce a pamphlet that explains both the options that can be used to preserve land and a synopsis of the possible tax benefits that it donors may realize. This pamphlet should be sent to all landowners who express interest in wetlands preservation and possibly mailed with annual tax statements to all wetland owners - or to all landowners.

Recognizing Donors. Donors should be invited to attend an onsite ceremony with elected officials and should receive a formal document or plaque of appreciation from the government. Such ceremonies would only be conducted after negotiations have been completed and both parties are satisfied with the conditions of the land transfer.

Providing Services to Potential Donors.. To the greatest extent possible, local government staff should assist the landowner throughout the entire donation process. This includes offering step by-step information on making donations. In the course of evaluating a potential donation, information is collected that could be useful to the landowner in estimating tax benefits. For _ example, one of the early steps in negotiating a donation is to get an independent appraisal of the donation's worth. This appraisal could be made available to the donor, free of charge, for use in consulting a tax adviser or filing tax returns.

Accepting Donations in Installments. In many instances, a donor's tax benefits may be greater if the donation is made over a period of years. To attract the widest possible spectrum of donors, phased donations should be considered during negotiations.

Ensuring Ongoing Preservation. Although donors may base the details of their donation contract on tax incentives and other issues, often their prime motivation is a love for their lands natural features. To attract donors who may be concerned about the longevity of their site's protection, reversionary clauses and management agreements should be available as options in

donation contracts. Reversionary clauses stipulate that ownership of the land will revert to a specified conservation organization (of the donor's choice) if the terms of the donation are ever violated by the local government. Management agreements ensure long-term oversight of the property and should include a budget for site visits and maintenance. The local government should make it known in its promotional literature that these agreements and reversionary clauses are available for donation contracts.

Avoid at All Costs: Estimating Federal Tax Benefits to Donors

Income tax benefits for donors will vary greatly, depending on both the financial status of the donor and the value of the donation. The IRS is not bound by the recommendations of a local government, and most jurisdictions are not equipped to accurately evaluate the financial status of the donor. Therefore, to avoid conflicts of interest and charges of "preservatory malpractice," local government should refrain from estimating the income tax benefits of individual donations. Instead, all potential donors should be encouraged to seek their own financial counsel.

It should be noted that to qualify for income tax benefits, an easement must satisfy three IRS requirements: it must be granted in perpetuity, be held by a qualified organization (generally a government body or tax- exempt, nonprofit organization), and be donated exclusively for conservation purposes.

There are two steps a local government can take to ensure that any accepted donations will meet the IRS definition of "conservation purposes." First, a clearly delineated conservation policy (in relation to the type of lands accepted) should be adopted. Second, donations should be accepted only if they conform to that policy. To meet IRS guidelines, the government must clearly identify or delineate the lands that should be conserved, back the policy up with a significant commitment to achieve the conservation objectives, and accept only donations that serve or help to fulfill the conservation policy objectives.

F E A T U R E

Maintaining a Buyer's Edge

Any time that a prospective buyer shows interest in a parcel of land ,or any other single item, the seller is in a position to dictate the terms of the sale. Very often the seller takes advantage of this position by setting the price of the item much higher than the fair market value. This may not be a problem to an individual buyer, but governmental bodies have a mandate to spend public funds fairly and wisely. Paying more than market value for any property violate this public trust in several ways: it is a misuse of public funds, it is unfair to those sellers who only get market value for their properties, it raises landowner expectations, and it increases the cost of future acquisitions by elevating comparable land values in the area.

Competition among prospective sellers - not the local government's intention to buy one particular tract - should set the value of individual purchases. 'A number of methods can be used to promote competition among owners of wetlands that might be acquired under a preservation program. For example, a whole class of comparably desirable sites could be targeted, with the objective of acquiring several, but not all, of these sites. The market value of a group of desired sites could also be estimated, and less acquisition money than the estimate could be allocated.

If a single wetland is owned by several individuals, a situation called a "fixed purchase list" may arise. One or two landowners may attempt to hold out until all the other parcels are purchased, creating a situation in which their parcels are required to adequately protect the entire wetland. In this way, they may be able to raise the purchase price for their particular parcels. Closing all deals simultaneously can help avoid problems with these holdouts. Making all deals contingent upon the successfully completed negotiations with all other landowners can also help to avoid this problem.

Key Points

- ▼ To preserve a wetland, it is critical to secure the entire system and adequate buffer area to protect the system from surrounding impacts.

- ▼ A pre-negotiation site assessment should be conducted to determine boundaries, buffers, and site conditions.

- ▼ Early contact with landowners should focus on establishing trust and informing the landowners of their options.

- ▼ Successful negotiations ultimately require an understanding of the landowners' short- and long-term financial and personal needs.

- ▼ Throughout the negotiation process, program selection criteria should be used to ensure that program goals are being achieved.

- ▼ Soliciting donations can be very advantageous to a preservation program and, therefore, should be encouraged and made easy for landowners.

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Chapter 8
Managing Wetland Sites

Site management is an instrumental part of preserving functioning wetlands in their natural state. Both on site and off site impacts must be controlled if the long term viability o f a wetland is to be preserved. Management plans must be developed that consider the needs of the resource and any proposed uses of the area. They must also specify implementation actions that maintain the functions of the wetland over the long term.

This chapter presents the major considerations of one o f these plans. Although each wetland may be managed differently, a watershed-or jurisdiction-wide preservation perspective is needed to ensure that wetlands are managed as components of watershed ecosystems and, thus, are preserved as a functional part of the larger landscape.

Selecting a Custodial Entity

Managing a site requires matching the functional attributes of the wetland with the appropriate custodial entity. For example, if the property serves recreational or educational functions, it could be managed by a parks department. Care should be taken to ensure that the qualities of the wetland are not lost because of inappropriate management. In this regard, it may be necessary to assess and possibly redefine agency roles in relation to wetlands preservation. For example, it might be best to establish a new natural resource division within the custodial agency and define new management guidelines for wetlands preservation.

Most often, the available management entity is a parks department. However, real property, surface water management, or other departments may have custody of wetland sites that are appropriate for preservation. It is also possible that another government entity or private organization may become the appropriate custodial entity through a cooperative agreement. If the site has sensitive features that need protection from human intrusion, it might be best managed by a land trust - a good alternative to a traditional parks department with a mandate for providing public access. Local citizens' groups may be suited to oversee and manage certain types of wetlands in place of or in association with a local agency. This may be a particularly viable alternative if management has been conveyed to the holder through a conservation easement.

Since parks departments and other local departments or community groups may lack experience in managing natural sites, the development of management plans may require consultation with technical experts from local government, a nearby jurisdiction, or state and federal agencies. Agencies with wetlands resource knowledge include the state departments of Ecology, Fisheries, Natural Resources, and Wildlife, and the federal Soil Conservation Service, USFWS, and EPA. Local colleges 'and universities are also sources of technical expertise.

Most landowners have definite ideas about what is appropriate for their property. Thus, for conservation easements, it is important to work closely with the landowner when developing a management plan. Developing management plans on easement lands should occur at the time of final negotiations for the easement, so that management recommendations can be included in the easement document.

Wetlands Restoration

A light level of wetlands restoration (or "preserve site rehabilitation") will likely be a necessary part of management for most wetlands that are preserved, because widespread human activity . has affected all wetlands to some degree. At a minimum, restoration efforts might include, removing trash, halting recreational abuse, removing invasive exotic plants or revegetating buffers.

Conducting a full-scale restoration effort is a much larger task -one that often includes returning highly degraded systems to their historical, natural conditions. Although not formally-considered part of a preservation program, wetlands restoration is a necessary part of a comprehensive wetlands protection effort.

Unfortunately, very little is known about restoration of complex wetland systems - other than that most forms of restoration can be costly and do not guarantee that lost wetland functions will be recovered. However, within the context of maintaining critical attributes within a watershed or other discrete ecosystem, it may be necessary to engage in some forms of wetlands restoration to achieve desired program goals for ecosystem health.

Crafting Pre-Acquisition Management Plan

A sketch of the management plan should be drafted as part of the proposal to acquire a particular wetland. The proper custodial entity and potential restrictions or activities on the site should be preliminarily identified in this sketch. The length and complexity of the final plan will depend on the needs of the site. Much of the site assessment information, which forms the basis of a management plan, should have been collected as part of the detailed site inventory conducted earlier. However, more information may be desired for certain types of actions, including restoration. Preliminary management cost estimates should also be made during this stage of plan development.

Elements of a Management Plan

Developing management plans for each wetland site in the preservation program is the most direct way to ensure the long-term functioning of each wetland. Management plans should be developed by or in conjunction with the custodial entity. The custodial entity should start by assessing the site and identifying how it will be restored and maintained.

The more specific and action-oriented a plan is, the easier it will be to implement and monitor for effectiveness. If too much is left to interpretation, neither the wetland nor the public will receive maximum benefits. A management plan should not only recommend a course of action but

should also prescribe the steps needed to follow that course. The management plan should describe 1) a detailed action plan for maintaining arid (if needed) restoring wetland integrity, 2), a program for monitoring wetland functions and assessing the effectiveness of plan directives, and 3) a method for making adjustments in-the plan, should the situation change or new information become available. It should specify whether any new departments, people, or funds are required. Plans should include specific recommendations for immediate (three-year to five-year), as well as longer-term, planning horizons. The elements of a management plan are as follows:

Assessment of Site Qualities and Protection Needs. Before a management plan can be tailored to a specific wetland, the wetland's existing condition arid characteristics must be assessed. Included in such an assessment are the wetlands' location, its qualities within the landscape, existing plant and animal species, hydrologic conditions, sensitivity to various levels of use, current impacts, historical uses, characteristics of its buffer area, and any special sensitivities of the site. Much of this information should have been collected at earlier stages in the process.

The management plan should include documentation of resources that are present, the condition they are in, the sensitivity of the resource to various levels of use, and whether any rehabilitation or ,special care is needed. Maps and photos are helpful to document the state of the wetland over time.

Assessment of Level of Public Use. Some wetlands are acquired primarily for the public benefits of access to recreation, education, research, aesthetics, or wildlife viewing. In these instances the management plan must incorporate a given level of public use and make recommendations based on the interaction of that use and the site's existing condition and sensitivity. The allowable level of access - one that will not endanger the resource -should be determined in consultation with a wetlands ecologist.

Definition of Goals and Objectives for the Site. Site protection goals should be established and implementation objectives should be identified. The plan should outline implementation tasks that chart an overall course of action to meet the implementation objectives and the broader, long-term goals.

Actions to Restore and Maintain Wetland Function and Provide for Public Use. Often some activities will be necessary to restore the wetland (recover its optimum condition). These might include removing litter, revegetating buffer areas, restoring water levels to historic levels, controlling exotic plants or animals, and managing off-site activities to reduce continued impacts on the wetland. Management guidelines, developed by the Puget Sound

Wetlands and Stormwater Management Research Program (administered by King County) may be useful in preparing action plans to rehabilitate specific sites.

Implementation steps that provide for the desired level of public access (in the context of resource protection) also need to be established. Tasks or projects to be accomplished within an expected time frame should be defined, and responsibility for implementation should be identified and assigned to appropriate staff.

Financial Plan. To provide funding for resource protection or an appropriate level of public use, a management endowment account may be created. An endowment account operates as a continual funding source, providing operational cash from interest , received on invested principal. Local government contributions from tax programs, land transfers, and other fundraising efforts (described in Chapter 9) can be applied to an endowment account, covering management expenses. Cash donations from the community can be solicited to augment the principal. For public access sites, park district-funds can also be applied to management costs.

Monitoring Program. Wetlands must be monitored to record and respond to changing conditions and ensure long-term sustenance of wetland functions and values. Monitoring is the only way to determine whether changes in management actions are needed. For example, if a certain bird species is sensitive to disturbance during its breeding season, it may be necessary to close or reroute trails during certain times of the year. Data from monitoring will also reveal whether off-site disturbances are affecting the wetland functions. If discovered before serious impacts occur, it will be less costly and more likely to remedy their effects. Wetlands with public access should be monitored to ensure that access is being provided to targeted user groups, at a level that the wetland can tolerate. It is important to determine whether the expectations of users are being met:

The management plan should specify the system for monitoring. wetland functions and levels of use and assessing any goals and objectives for the wetland. A monitoring scheme could involve such activities as taking photographs during various seasons, keeping visitor records, performing water quality tests, conducting a vertebrate census, recording plant community composition and distribution, and generally noting any impacts.

For less-than-fee properties where conservation easements are held by the jurisdiction, additional monitoring responsibilities apply. The terms of a conservation easement should clearly spell out the allowed activities on the property and describe the intent of the jurisdiction to closely monitor compliance with these terms. For these properties, frequent monitoring is the best way to avoid violations of conservation easement terms.

Generally, lands protected by conservation easements are most A vulnerable to disturbance when ownership changes hands. Even though conservation easements are recorded with the title to the property (and, hence, should be revealed to potential buyers through a title search), new owners often find them rather abstract. When the property changes hands, it is worthwhile to visit ' the new owners and, explain the terms of the conservation easement. A monitoring program that includes regularly scheduled site visits (a minimum of one per year) will not only keep local government informed of development around their easements, but will also tell new owners that the local government intends to hold them to the restrictions. Regular visits will also help to educate new owners about the values that the restrictions are meant to preserve and may help to encourage donations of other easements.

As the number of acquired easements grows, so does the potential for violations and the need for a formal monitoring program. A local government may need to add staff to monitor all of its easements to determine whether violations have occurred and to evaluate whether the easements are having their intended effects. Neighboring landowners or neighborhood groups might be enlisted in the site monitoring effort. An educational effort directed at neighboring landowners and people that influence the wetland will provide for ongoing observation to circumvent problems early on and help reduce monitoring costs.

Enforcement Procedures. The management plan should describe mechanisms for enforcing wetland protection codes. For example, if area residents dump trash or waste in the wetlands or if up-stream developments have improperly designed stormwater retention basins, then enforcement should be pursued. Enforcement begins with monitoring to identify problems, followed by actions to control them. Enforcement through the civil violations system is appropriate only if the problem is caused by an outside agent - not by a flaw in the management plan.

Enforcement tends to be easiest if wetlands are owned in fee by the local government. When the land is owned by local government and there is some level of use of the property, problems are more likely to be noticed before they become irreversible. On less-than-fee lands, penalties for violating the terms of a conservation easement should be clearly specified in the original

document, including clauses that require the owner to pay court costs and the costs of restoring the property to its intended condition.

If a land trust becomes a holder of conservation easements, it is recommended that the trust set up an endowment fund that contains a minimum of $2,500 for each easement held. In actuality, most land trusts prefer a minimum fund of $5,000, and the requested amount may be higher than that. Although one might think that the endowment size would relate to the size of the property, it is more directly related to any anticipated violation of the easement. The interest from the endowment account should cover the recurring costs of monitoring, and the principal could be used for any necessary legal actions. The local government could include a similar investment when drawing up management plans for its easements.

Amending or Modifying the Plan

The management plan should be modified if monitoring reveals that problems have arisen from changes in the wetland environment or that the original assumptions and data on which the plan was based are invalid. Periodically, new information or management techniques should be incorporated into management plans. The management plan should also be reviewed on a regular basis to evaluate its effectiveness. The original plan objectives might also be revised. For example, if objectives are being easily met, then more ambitious objectives might be included in a plan update. As with the original plan, modifications will need to be implemented and their results monitored.

Research: A Growing Need

Wetland management should be responsive not only to changing conditions on the site, but also to new research and information. Until recently, insufficient research had been conducted on long-term wetland functions and preservation methods. The Puget Sound Wetlands and Stormwater Management Research Program is currently studying aspects of this topic. Much information is being collected about stormwater and nutrient entrapment and assimilation capacities of wetlands. Impacts on the monitored wetlands are being documented so that conclusions on the changing character of the wetlands can be drawn. New insights from this program will be valuable in designing management plans to maintain certain functions of wetlands in the Puget Sound-basin. Similar research is also needed in other regions of the state, to provide the detailed information that is necessary to ' successfully preserve the functions of other types of wetlands _ through appropriate management actions.

F E A T U R E

Preserve Design

A preserve design is a site-specific plan for ensuring the long-term viability of the natural systems on-site. To develop the preserve design, factors that might have a negative impact on the natural features must be assessed. For example, fully evaluating the potential threats to the biotic community requires an understanding of the life history and habitat needs of individual species within a wetlands, in the context of the wetlands' interconnectedness with the surrounding landscape. Using this information, an adequate buffer surrounding the wetland can be defined, the boundaries of the reserve can be set, and management plans can be developed. Key -considerations for preserve design are content, context, scale, and time.

The content of the preserve includes the elements that have been identified for preservation - for example, a rare plant community or the nesting territory of a threatened animal species. For individual species, an understanding of the specific habitat needs, range, and minimum viable population size is necessary to ensure long-term survival. A minimum viable population is the lowest number of animals or plants that, by providing the necessary genetic diversity, can sustain itself. Without adequate population size or connectivity with other populations, a species may eventually become extinct.

An analysis of the context of the site within the landscape provides information on surrounding land use, connection to other natural areas, and potential external threats that could impact the system. All of these factors must be considered to determine the appropriate preserve boundaries and develop a management plan. Establishing adequate buffers to protect the wetlands from impacts in the surrounding landscape is an important component of preserve design. Because wetlands are part of a much larger hydrologic system within a watershed, effective preservation requires an understanding of the interconnectedness of parts. By establishing a network of reserves connected by corridors, many of the inherent problems of small, isolated preserves can be offset.

Scale of the reserve is another important consideration, especially in fragmented landscapes. In general, based on island biogeographic theory, the number of species surviving within the reserve is a function of the size, proximity to other existing reserves, and type of surrounding land use (Diamond, 1975). The availability of genetic diversity, impacts related to the-so-called "edge effect," and the impacts of predators or invasive species are all factors that influence species diversity and extinction rates in reserves. In general, small reserves tend to support lower species

diversity and extinction rates tend to be higher. Large reserves enable the long-term persistence of a larger number of species, and extinction rates tend to be lower. Thus, size is an important criterion of preserve design.

Time is an important consideration, even after the land has been protected. Most often, preserve design reflects a "snapshot" assessment of ecosystem dynamics and does not adequately address the dynamic nature of natural ecosystems (White and Bratton, 1980). Plant communities change over time as a result of succession and natural disturbances. An attempt to protect a single species within an area should address this fact, and management plans should support natural succession, if possible.

Key Points

▼ Long-term preservation of sites requires the development of site-specific management plans and a commitment of funds and a custodial entity for management.

▼ Management planning should incorporate elements of preserve design.

▼ Management plan elements include:
- Assessment of site qualities and protection needs
- Assessment of level of public use
- Definition of goals and objectives for the site
- Actions to restore and maintain wetland functions or provide for public use
- Financial plan
- Monitoring program
- Enforcement procedures.

▼ Site monitoring is used to determine whether changes in site management are needed and whether enforcement actions on conservation easements must be implemented.

▼ Conservation easements require that the management plan be negotiated and finalized prior to transfer of the property.

Key References

Lind, B 92. *The Conservation Easement Stewardship Guide: Designing, Monitoring an Enforcing Easements*.

University of Wisconsin. *"Restoration and Management Notes."*

Chapter 9
Obtaining Funding and Offering Incentives

Designing and successful wetlands preservation program requires money. Some level of funding support will be needed in two major areas: site acquisitions and site management. Many creative options for meeting these program needs are available to local government This Chapter presents several of these options and explains the different incentives for community involvement. A directory o funding sources for wetlands preservation is contained in Appendix C of this guidebook.

Funding for Wetlands Preservation

Wetlands preservation activities will usually need to secure funding from sources both inside and outside the local jurisdiction. Many funding sources have placed restrictions on the use of their money. Therefore it is important to follow all stipulations and use funds only for their intended purpose. Gaining the greatest flexibility and highest likelihood of success means pursuing a combination of fund raising alternatives.

Grants, Loans, and Fundraising Events

Capital Campaigns and Special Events are effectively used by many non-profit organizations. These organizations have found that asking for money works! For special events, the funding request is focused on an immediate need with which donors can identify, such as the acquisition of a locally known and much beloved piece of open space. For capital campaigns, efforts are focused on meeting the more extensive funding needs of a program or its major portion; for example, to fund health care research.

For either approach; a goal is initially set and a plan is developed to reach that goal. Funds are then solicited from individuals, foundations, and corporations. Fund-raising through a capital campaign may take two to three years. For projects of this scale, it is best to hire a professional consultant to direct the campaign. Under most circumstances, this person will raise considerably more than their salary in the long run.

Through the use of "dedicated funds," separate accounts can be established to accept donations for projects that are earmarked for specific communities, such as the area within a community plan or drainage basin. To accept unrestricted cash donations, a general account (or "wetlands bank") could be used to fund monitoring, enforcement, and maintenance activities.

Challenge Grants provide funds to local governments, with stipulations that a matching amount - usually 25, 30, or 50 percent -be raised'. The award of such grants is usually competitive, and often . conditions are placed on the use of these funds. Challenge grants
provide local governments with an opportunity to creatively mix and match different program funds to meet specific site needs.

Low Interest Loans may be viable funding options for local jurisdictions. They are best used if a unique opportunity to preserve a highly valued-wetland arises, but acquisition funds are otherwise unavailable. Simply put, these loans provide the jurisdiction with the freedom to look for repayment funds later. However, conditions may be placed on the application of these funds. One low interest loan program is the State Revolving Fund administered by Ecology. Details of this program are contained in Appendix C.

Taxes and Fees

Conservation Futures Taxes generate property tax revenues for the purchase of open space lands. Conservation futures taxes are authorized by the Current Use Taxation Act, RCW 84.34, which allows counties to levy a tax of up to 6 1 /4 cents per $1,000 of assessed valuation for the purpose of acquiring open space. Agree-merits can be negotiated that allow sharing of the collected funds by counties and the cities within them. The funds apply to wetlands and other lands classified in open space current-use taxation pro-grams. Land may be purchased in-fee or less-than-fee, but funds may not be used for maintenance or restoration. The amount of money that can be raised by these taxes will vary among jurisdictions.

Fee-in-Lieu is a regulatory technique used by many cities and counties. Basically, it requires that developers set aside a portion of certain subdivisions as open space. The jurisdiction may also re-quire improvements to be made on lands left as passive open space. A developer who does not wish to dedicate open space lands during the subdivision process has the option of paying the local government an equivalent fee. This fee tan then be used by the jurisdiction to purchase wetlands or other open spaces within the community.

Counties and cites that do not have this regulatory provision may wish to establish it as a fundraising tool. However, it must be understood that this provision applies only to the conversion of uplands and other open spaces - not to wetlands. Provisions regulating the conversion of open space wetlands involve separate mitigation issues. Therefore for this discussion fee-in-lieu refers only to the use of funds obtained from the loss of non wetland open space to assist in acquiring wetlands.

The amount of money collected through fee-in-lieu payments is not large. Given the usual disposition of these funds and the small amounts generated, it is not likely that this will become a major source of funding for wetland reservation activities. However, opportunities may arise to use funds from this source in conjunction with other funding sources or to apply them to other preservation program needs: for example, restoration work, interpretive or educational facilities or management activities. County divisions involved in collecting and spending these monies and conducting wetland preservation activities should work together to take advantage of these opportunities:

Impact Fees are provided by RCW 36.70, the Growth Management Act (GMA) of 1990. Specifically, these fees are authorized for public streets and roads, publicly owned parks, open space and recreation facilities, school facilities, and fire protection. Wetlands could be included in the categories of parks, open space, and recreation. Therefore the potential exists for using the

Conservation Futures in King County

King County has levied the full amount authorized by the conservation futures tax since 1987, raising approximately $4 million per year. Since 1988, King County staff have usually recommended specific acquisitions to its Citizens' Open Space Committee. If nominations are approved by this committee, a proposal is sent to the county council. With council approval, the Office of Open Space is asked to pursue acquisition. Lands acquired are generally held and maintained by the Parks Department. King County, has not yet used conservation futures funds directly for wetlands protection. Conservation futures funds are currently being used to supplement conservation bond monies under a cooperative sharing agreement with the cities.

impact fee provision to assist in preserving wetlands where conditions meet the terms of GMA. Fees collected under this provision are to be "reasonably related" to the new development and are not to exceed a "proportionate share" of the costs for improving the system.

Real Estate Excise Tax (BEET) was approved by the Washington. State Legislature under the Conservation Area Acquisition Bill of 1990, authorizing county governments to levy up to a one-percent tax on property transfers. Money collected under this tax is shared between the county and cities. The amount of revenues generated depends on the number of property sales in a county in any given year and the value of the properties transferred. This tax must be approved by a simple majority of voters and must have a "sunset" date. A certain percentage of the revenues generated through REET can be used for long-term stewardship of any open space lands that are acquired.

As with conservation bonds, this type of voter-approved tax will only be successful if there is a broad base of public support. Such support is easiest to generate if the jurisdiction has a clear spending plan. This does not mean that individual properties need to be identified; rather, it must be established that clear criteria will be used and that the types of open space lands for purchase have been defined. Selection criteria of the wetland preservation program could be incorporated directly into an open space spending plan.

In June 1990, San Juan bounty's REET was approved by the voters. This vote resulted in the establishment of the San Juan County Land Bank, composed of a public advisory committee and a paid director, to develop priorities for land acquisition and negotiate land transactions:

Fee-in-Lieu at Work

Title 19.38 of the King County Code addresses land dedication or reservation for parks and open space or fee-in-lieu thereof. In King County, Most developers opt to pay the fee rather than provide open space, although some developers with large plats choose to provide tennis courts and other sites for active recreation. In an effort to encourage more developers to dedicate land as open space, the zoning code is currently being revised to incorporatL4 new standards for the county's fee- in4ieu regulation for open space.

Approximately $1 million has been collected under this program in King County since 1982. The ordinance is still in effect and more money will be added to the fund, although it is difficult to determine the exact amount. Funds are currently deposited into an account for the acquisition or capital improvement of parks and recreational facilities within the service area of any new development. Because these revenue amounts alone are generally not large enough to allow for significant land acquisitions, the money is often spent on capital improvements, typically upgrading playground equipment.

Cutting Down King County's TREE

In 1990, King County developed The Real Estate Environmental Endowment (TREE) plan, in consultation with public officials and citizens from incorporated and unincorporated areas throughout the county. Under the TREE plan, funds to acquire open spaces, parks, trails for public access, and wildlife habitats would be raised through a real estate excise tax on land transactions. Along with these or other public benefits, wetlands would also have been acquired.

Four public meetings were held to discuss and refine the plan. Although approved by the county council, the TREE plan was defeated in the general election of November 1990. Had it passed, TREE would have generated between $60 million and $80 million annually, for a total of approximately $500 million. Copies of the TREE plan are available from King County's Office of Open Space, 1621 Smith Tower, 506 Second Avenue, Seattle, WA 98104.

Sales, Exchanges, and Investments

Conservation Bonds are authorized under RCW 36.67.010; RCW 39.36.020, and RCW 84.52.052, which empower counties, subject to voter approval, to issue general obligation unlimited bonds and to retire the debt with an excess property tax levy. The only statutory limit on the amount of a bond issue is the aggregate debt limitation of 2.5 percent of the taxing area's assessed valuation. The state's constitutional limit is a less constraining five percent, which means it is possible that this percent could in crease someday. In practical terms, the only real ceiling on a voter-approved land preservation bond issue is the electorate's willingness to incur new debt and the additional tax burden needed to retire it. Bond issues require a broad base of support throughout the jurisdiction, including elected officials and residents of incorporated areas.

Voter-approved bonds provide much greater sums for open space acquisition than other alternatives. They also provide an excess levy of taxes to retire the debt so that open space funding will not be in competition with capital needs of other programs.

There are also some drawbacks with voter-approved bonds. These include: the public expense of the election; the encumbrance of future administrations and taxpayers with debt; and the higher level of taxation that will politically, if not legally, limit. the ability to deal with future emergencies or economic crises.

Conservation Investors can assist a preservation program immensely. Essentially, this approach is similar to that of a real estate investment trust, but with land preservation as the overriding goal. Financing a preservation project is facilitated by a pool of investors. For their participation, the investors receive tax benefits

and, upon resale of the property, income and capital gains. The resold property may then have development restrictions or conservation easements attached.

County Trust Lands are privately owned forest lands that (under RCW 76.12.020) have been forfeited because of non-payment of taxes and have reverted to state management. Title to these lands is held by the state Department of Natural Resources, which manages them for timber production. A percentage of the income from these lands is transferred to the county for use in school programs (RCW 76-.12.030). However, a county can request that these lands be returned to the county if their purposes are consistent with state and county outdoor recreation plans (RCW 76.12.072). Counties could review these lands under their assessment criteria and request that trust lands that meet their criteria be returned to county control. A county can also exchange trust lands for other lands that would better serve public park purposes. Therefore, it may be possible to exchange county trust lands for significant wetlands located on other parcels.

Land Exchanges are legally and politically complex, and the amount of locally held land is usually low. Therefore, exchanging local holdings for wetlands is unlikely to be a major component of a wetlands preservation program. However, this technique may be valuable in isolated instances, especially if land is donated to local government specifically for wetlands preservation.

Deed restrictions may prohibit the exchange of certain parcels for wetlands. County and state laws, court decisions, and the original funding source can also impede or prevent exchanges of property. Local government should first inventory its holdings to evaluate which lands might be exchanged and estimate the funds that could be generated by exchanges.

In most instances, a proposed exchange will need to be approved by the elected officials of a jurisdiction. Actual negotiations could be conducted by the local departments that are involved in evaluating or managing the acquisitions. For example, in King County, these negotiations are conducted by the Real Property Division, occasionally in conjunction with the Office of Open Space.

Appraisals may be conducted by an outside firm if the parcels involved in the exchange are of moderate to high value, or if conditions of the exchange are complex. Legal agreements and title work can be done by local government, if such in-house expertise is available. Before finalizing any deals, it is important to research both the physical and legal characteristics of all properties proposed for exchange. Any funds received as part of the exchange are usually returned to the department or agency that was in charge of the exchanged parcel.

Sales of Surplus Property and Unsuitable Lands can also finance ` preservation programs. Most county governments hold lands that have reverted to government ownership for non-payment of taxes. These tax title parcels can be incorporated into the parks system, or they can be sold at open auction to recover back taxes or to reduce the local jurisdiction's holding and maintenance costs.

Before any of these lands are incorporated or-sold, they should be inventoried, and any wetlands on these lands should be evaluated using the program's selection criteria. Appropriate properties could be transferred directly into the wetland preservation system. Properties with wetlands that do not meet the selection criteria could be sold, and all or a portion of the proceeds could be used to purchase other, more suitable wetlands.

By selling donated lands that are unsuitable for wetlands preservation, a local jurisdiction can also generate funds for wetlands acquisition. The implications of accepting a donation of unsuitable land are discussed in Chapter 7.

Surplus Sales: Raising Money for Wetlands

Before selling land at auction, King County first offers the property to Parks, Surface Water Management, Public Works, and other county programs. If none of these programs will serve as the custodial agency, the property is classified (with county council approval) as surplus.

King County periodically holds property auctions to dispose of its surplus parcels. A minimum price is set, which, depending on the parcel's characteristics and the area's real estate market, may be as low as payment of accrued back taxes. Generally, properties are sold on contract with the County. Terms of sale include down payments of 20 percent and an interest rate of 12 percent.

Incentives for Wetlands Preservation

While fee-simple ownership is the most effective method of wetlands preservation, in some cases it is not financially feasible or politically desirable to purchase property outright. Under certain circumstances, the use of both regulatory and non-regulatory incentives by a local government can provide short-term aid to protect some quality wetlands.

Density bonuses are regulatory incentives that allow developers to increase the number of housing units on lands best suited to development. They are granted in exchange for certain street improvements, community facilities, wetland preservation measures, or other specified amenities.

Another regulatory incentive is the Transfer of Development Rights (TDR), in which the future development potential of one piece of property (the sending site) is shifted to another piece of property (the receiving site). Once this shift has occurred, most TDR systems require that legal restrictions be placed-n the sending and receiving sites. Use of the transferred development potential is prohibited on the sending site, and the receiving site is permitted to receive only those additional development units that have been identified through the legal agreement. TDR programs may require that sending and receiving properties be designated in advance. They may also provide for "floating" development rights, which can be applied in broader receiving areas.

Unlike many other land protection strategies, TDRs do not prevent development. Instead, land-use activities are directed to areas that can withstand more intense development. Because the complexity of TDRs makes them cumbersome to effectively administer and implement, most jurisdictions have had little success with this form of regulatory incentive. For several years, Island County has had provisions within their regulatory framework to allow for some transfers of development rights. However, they have not formally used TDRs to date.

Current Use Taxation (CUT) programs enable state and local governments to value certain types of property according to current use, rather than the potential developed use, or full market value, as is normally required by law. Such valuations are also known as "differential assessments." A form of non-regulatory incentive, CUT programs are intended to reduce assessed values and property taxes, thereby reducing pressure on owners to sell their land for development.

The CUTting Edge

Thurston County's CUT program provides up to a 90-percent reduction in taxes on eligible properties. Eligible properties are defined through a public benefit rating system, which evaluates parcels according to criteria that include aquatic ecosystems, significant wildlife habitat areas, and special plant or animal sites. The program was implemented in November 1989 and, to date, has been well received.

In King County, CUT benefits have been limited to open space lands that provide public recreational benefits or that the County intends to purchase as open space or park lands in the future. The King County Sensitive Areas Ordinance has expanded the application of its CUT program to include any site that meets the definition of a sensitive area, has a sensitive area setback in place, and has not already received density credits. Most wetland areas could meet these criteria. King County is currently developing its own public benefit rating system.

In 1970, the Washington State Legislature passed the *Current Use Taxation Act* (RCW 84.34), which enables local governments to institute differential assessments of certain types of lands. The *Current Use Taxation Act* covers three-categories: open space, farmlands, and timberlands. Wetlands are included under the Act's definition of open space.

The legislation was amended in 1985 to allow counties to establish "open space priorities… an open space plan and public benefit rating system." Under such public benefit rating systems, counties can base the amount of deferred property tax on a parcel's conformity to adopted open space priorities, such as wetlands- preservation. Although only certain properties can be included in a CUT program, the design of a public benefit rating system gives local government greater flexibility for addressing open space needs.

To enroll in a CUT program, landowners commit their properties to the program for a minimum of 10 years. Enrolled properties can be removed from the program at the landowner's request or if their benefit to the public has changed. Contracts also provide penalties plus recapture of lost tax revenues if enrolled properties are removed from the program by the owner before ten years have passed.

CUT programs carry several advantages. These programs are voluntary and provide concerned landowners an incentive to continue to protect wetlands. They can slow land conversion and allow local governments time to plan for resource protection and perhaps raise funds for wetlands acquisition.

There are also several disadvantages. CUT programs have yet to be proven effective at permanently protecting open space lands that are under pressure for-urban development. In fact,

by reducing financial pressures through tax relief incentives, they may be encouraging growth and incompatible development. Development penalties and tax recapture provisions of a CUT program are seldom substantial enough to deter withdrawal for development. In a strong real estate market, these costs are simply passed along to buyers. Thus, a CUT program can serve as the perfect vehicle to reduce a developer's holding costs.

On the other hand, if rollback taxes or development penalties are too sizeable, few landowners are likely to participate in a voluntary CUT program. King County's experience indicates that many landowners feel intimidated by the process of enrolling their property or are unhappy with the occasionally small tax reductions that a CUT program may yield.

Enrollment in a CUT program does not necessarily guarantee a reduction in taxes, especially in urban areas, where land with dedicated open space can be assessed as more valuable than land that is fully developed. Less urbanized counties are likely to experience better participation in CUT programs. Education programs designed to explain the enrollment process to landowners and the methods by which benefits are calculated or received may help to boost participation and the effectiveness of CUT programs.

F E A T U R E

Implementing A Successful Funding Program for Land Acquisition

Getting bonds passed to support acquisition efforts can be a difficult feat. In *Local Land Acquisition for Conservation: Trends and Factors to Consider*, a recent report by the World Wildlife Fund (WWF), a number of ways to improve success are proposed.

The report explains why an increasing number of states and local governments are approving funds for land acquisition. It analyzes factors that are considered important in formulating and passing a state or local funding mechanism and discusses the advantages and disadvantages of popular funding mechanisms. A cross section of current funding efforts across the nation is also provided.

WWF researchers surveyed dozens of state and local officials and citizen activists who have been involved in community efforts to approve funding to acquire natural lands. They identified several key elements that contribute to a successful funding program:

Creating a Proposal

- Create a committee or task force with broad representation whose recommendations will be acted on.
- Understand voter sentiment before creating a proposal.
- Create public participation strategies that don't polarize voters or dissipate momentum.

- Consider local economic conditions when deciding the timing and size of funding proposals.
- Create clear links between open space preservation and local economic benefits.
- Present land acquisition proposals to the public as a method of confronting urban sprawl.
- Present open space protection as a way to address environmental threats.
- Directly address concerns about the financial impact of open space acquisition measures on the local government.
- Directly address the financial impact of the proposal on taxpayers..
- Publicize standards for the appropriate amount of open space and parks. ,
- Establish a clear and unbiased land acquisition process.

Placing the Proposal on the Ballot

- Choose an appropriate agency to administer the acquisition program,
- Consider the pros and cons of specifically identifying properties for acquisition.
- Avoid ballots', containing controversial spending proposals. '
- Time the referendum to take advantage of the attitudes of voters and decision makers.
- Design the wording and placement on the ballot to increase voter approval.

Getting Enough Votes

- Develop broad-based grassroots support.
- Turn potential opponents into allies.
- Use publicity effectively.

Copies of this report can be obtained from the World Wildlife Fund, 1250 24th Street NW, Washington, DC 20037.

Key Points

▼ Preservation programs will need to rely on a diversity of funding sources.

▼ Asking for money has proved very successful and, therefore, should not be overlooked.

Funding mechanisms to consider include:

- Capital campaigns
- Challenge grants
- Low interest loans
- Conservation futures
- Fee-in-lieu
- Impact fees
- Real Estate Excise Tax
- Conservation bonds
- Conservation investors
- County Trust Lands
- Land exchanges
- Sales of surplus property and unsuitable lands.

▼ Incentives for protecting land include:

- Density bonuses
-Transfer of development rights
- Current use taxation

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Chapter 10
Educating and Involving the Public

Public support is crucial to the success o f any comprehensive conservation program. For example, in parts o f Washington where public awareness about environmental issues is high, voters have supported bond issues and regulations for the protection of open spaces. In parts of the state where public awareness is not as high, education campaigns are usually needed before protection programs will be accepted and supported

This chapter discusses the key role that education and citizen involvement play in wetlands preservation. Help with fundraising, spreading the word about preservation. efforts, informing landowners, collecting information about wetlands, and monitoring properties - these are only a small sampling of the benefits provided to local jurisdictions with active education and involvement programs.

Public Education

Historically underfunded and neglected, public education is a powerful component of wetlands protection. A's people learn more about the values and functions of wetlands, their perceptions and behavior toward wetlands often changes. Educational programs foster understanding and recognition of wetlands as important natural resources. They stimulate public and private sector support for the necessary changes in behavior and financial commitment that make wetlands preservation happen. They can serve as a supplement and an alternative to enforcement efforts. The value of a wetlands education program increases exponentially as people apply their new knowledge and awareness to other wetland issues and share information with each other.

A local wetlands preservation program should, at a minimum, include the following long-range public awareness and education goals:

- Generate the commitment necessary to make the program work and sustain it over the long term
- Increase understanding of wetland functions and values
- Educate and involve landowners, individuals, groups, businesses, industry, and government in the preservation of wetlands.

Within the context of a preservation program, education should focus on meeting specific program needs. If resources allow and other wetlands protection programs are anticipated or already in place, a more broad-based education effort can be conducted. The level, of effort required on the part of a local government will depend on the available funding, proposed time lines for accomplishing goals, levels of citizen involvement, and several other factors. Public education efforts may also be designed to promote involvement in volunteer activities.

The media is an effective way to inform others about program efforts and successes. To help spread the word about preservation and solicit support for the program, all program successes - no matter how small the acquisition -should be announced. It is important to establish good working relationships with media staff, notifying them regularly about program progress and thanking those who assist:

Working with Citizens' Action Groups

Most citizens' action groups have originated from grassroots meetings of concerned individuals. They provide a ready source of "people power" to accomplish tasks as diverse as cleaning up a wetland; educating schoolchildren, or lobbying for increased wetland protection. Because they are not directly associated with government, volunteer groups are often able to garner support for issues and projects that would be difficult for a local government to pursue.

Citizens' action groups generally represent people with common issues or concerns. Their memberships may range from the residents of a local neighborhood to the inhabitants of a broad geographic area and may focus on immediate problems (for example, the threat of losing a particular piece of open space property) or larger, issue-oriented goals (for example, restoring habitats along stream corridors within a community). Many of the larger citizens' action groups such as the Audubon Society or Sierra Club commonly organize and coordinate volunteer action groups around specific issues. These volunteer drives may draw from the group's existing member pool as well as other citizens in the community.

Citizens' action groups have been involved in a variety of volunteer projects directed at wetlands protection throughout the state. In the Puget Sound area, for example, citizens' groups are actively engaged in education, public participation and school programs, monitoring, fundraising, and acquiring land for preservation. Certain citizens' organizations have been very effective in promoting water quality and wetland issues.

A New Network for Wetlands Preservation

The goals of the Washington Wetlands Network (WETNET) are to educate the public on wetlands issues; link and support state and local organizations and individuals through 'communication, training, and research about wetland issues; promote wetlands protection and the policy of no net loss through support of legislation, regulations, and programs at federal, state, and local levels; encourage conservation and stewardship; and improve, through citizen monitoring, the implementation of wetlands protection programs at all levels of government. Based in Seattle, WETNET can be reached at (206) 524-4570.

By cooperating with these groups - aiding them in their efforts and coordinating local government preservation activities with privately sponsored activities - private efforts can be easily integrated into public programs of wetlands protection. The benefits of this pairing are reciprocal. For example, involving a citizens' group in a government project could encourage the group to forgo its narrow focus in favor of broader goals.

Relying on a group that is not competent to perform a task is obviously not prudent. However, training citizens to be partners in conservation is a long-term investment that can pay dividends indefinitely. Local governments should try to assist private groups whenever their goals are the same.

Assistance to citizens' groups can take many forms: technical -training, technical assistance, office support, trades of office space or other non-monetary considerations for services rendered, or awards of service contracts for site cleanups or other specific projects. Assistance in developing detailed handbooks, management plans, training programs, or site evaluations all might help volunteer groups with their wetlands preservation work.

Working With Wetland Landowners

How wetlands preservation programs are perceived by landowners will vary. They may be interested, indifferent, or even hostile toward the program. In general, working with these individuals requires extreme sensitivity, because the success of a wetlands preservation program may hinge on their perceptions - and their support.

Overall, it will probably be necessary to educate and inform wetland owners about the value of wetland systems and the available preservation options. General information about wetlands and preservation could be provided in special workshops targeting the general community or wetland landowners in particular. Brochures, flyers, guides on preservation options, and other materials should be prepared to inform landowners about the preservation program and its goals.

A more direct contact approach might be to distribute brochures to tell landowners about wetlands preservation. These could be mailed separately, included with tax statements, or hand-delivered. Volunteers from a citizens' group might be recruited to provide landowners with this information as part of a neighborhood outreach effort.

Developing landowners' interest in wetlands preservation will require personal contact by the local government. Once initial contact is made and information is presented for the landowner's review, a period of waiting begins. If no immediate response is received, contact should be made and information left again, followed by another period of waiting: Six months is usually the minimum amount of time that should elapse between contacts. Landowners' interest to negotiate may develop over months, even years.

Helping Citizens' Groups Help Wetlands

Educate and Involve. Local government can distribute wetlands preservation handbooks and other educational materials that contain instructions on forming neighborhood groups. These groups can help, in turn, by distributing information to landowners, monitoring secured wetlands, conducting wetland cleanups, and participating in other preservation activities. Pamphlets can also be provided that describe the kinds of activities that can be carried out by volunteers (with technical assistance from state or local agencies). They can also tell people about the different types of technical assistance that are available for preservation activities.

Form partnerships. By cooperating with citizens' groups, local government can maximize the effectiveness of this potentially vast resource and gain important allies in its wetland preservation efforts. Recognition of a citizens' group by the local assessment can also help to legitimize the group in the eyes of the community - allowing them to be more effective. Working with established citizen group can also help to legitimize the local governments program.

Provide administrative, technical, and financial support. The majority of citizens' groups operate with limited resources. Lacking formal office space, they may often be based out of a member's house. As a result, most groups are limited in the scope of projects they can undertake. Help from a responsive local government can open doors for a private group that is struggling to launch an ambitious project.

Negotiating with landowners takes a strong commitment and solid listening skills. This involves spending the time to understand the landowner's perspective: hearing what each person has to say, being patient and attentive to their needs, and providing help when called upon. With landowners who are reluctant to trust government, a great deal of time must be spent getting acquainted, usually over the course of several meetings. During these meetings, it is important that the landowners be helped to assess their personal needs regarding their property's outcome. Any financial limitations, tax considerations, and family pressures should be discussed and, if possible, resolved at this time.

In addition to any negotiations about site acquisitions, it may also be necessary to negotiate the terms of site management. It should be determined how any restrictions placed on conservation easements are to be monitored and, if the landowner is to retain ownership or management responsibility over the site, what general technical assistance may be needed. Local government should work closely with them to provide information and technical assistance for protection of the wetland's attributes.

Initiating a Volunteer Effort to Assist with Preservation

Volunteers can make substantial contributions to any wetlands preservation program. They can:

- Participate in contact groups and organize seminars, special talks, and presentations
- Establish "neighborhood watch" programs to monitor the ecological functions of wetlands and prevent off-site impacts
- Raise funds for local preservation projects or for larger wetlands preservation campaigns
- Publicize the program and its successes through newsletters and the media
- Establish "Adopt a Wetland" projects and other stewardship programs (as described in this chapter's feature, "The Adopt-A-Wetland Concept"
- Participate in trails construction, cleanups, creation of interpretive walks, and other site management activities.

Recruiting, training, and coordinating volunteers takes time and a firm commitment on the part of local government. Turnover rates among volunteers tend to be high, so new volunteers must be continually recruited and trained. In some instances, the technical skills of volunteers may be limited.

Local governments can apply for state and federal funding to develop and implement volunteer projects for wetlands preservation. The Puget Sound Water Quality Authority's Public Involvement and Education Model Projects Fund (PIE-Fund) is among the best sources of funds, as are private foundations. Potential funding sources for education and public involvement activities and programs are described in Appendix C of this guidebook.

Remember to Say "Thanks"

Recognition fosters pride and a sense of achievement that will go far in keeping the community involved in wetlands preservation. For this reason, while working with landowners, volunteers, and citizens' groups, it is important to acknowledge their participation. Acknowledgment can take the form of a letter from the mayor, a certificate of thanks, a gift, or an appreciation ceremony.

F E A T U R E

The Adopt-a-Wetland Concept

Within the context of preserving wetlands, citizens' groups and stewardship programs can contribute substantially to wetlands p preservation. A number of local governments are now benefiting Wetland Concept from the activities of this largely untapped volunteer work force. In recent years, many adoption programs have been formed to protect valuable resources (such as beaches and streams) and endangered-species (such as manatees and humpback whales). To preserve wetlands, the tactic of adoption by citizen volunteers ' can also be applied:

Stream Stewards - King County's Surface Water Management Division recently received a grant from Ecology to establish a Stream Stewards program in the Bear and Soos Creek basins. Among other duties; the. stewards will monitor native growth protection easements and ' ensure that all new development adheres to codes established for those basins. Where possible, wetlands easement monitoring activities are being coordinated with those of similar programs.

Adopt-a-Stream - In Snohomish County's Adopt-a-Stream program, various activities - for example, the installation of streamside fencing, incubation of fish eggs, and the production of informational brochures - are undertaken by volunteers (Pates, 1988). Individual volunteers or groups are matched with the appropriate size stream and stream related projects. Volunteers can participate in surveying the species and attributes associated with the stream, monitoring water quality changes, building interpretive trails, removing trash, stabilizing streambanks, building fish ladders, or educating their neighbors. Citizens of all ages and all types of community groups can get involved.

Adopt a Beach - Headquartered in Seattle, the non-profit Adopt a Beach program has developed a volunteer hotline that matches potential volunteers with appropriate groups. Additionally, the group conducts surveys of marine debris and beached birds, participates in wetland monitoring, and gathers data on paralytic shellfish poisoning.

Wetlands Observation Program - Supported by EPA and the U.S. Army Corps of Engineers, a model wetlands observation program is under development. For this program, citizens' groups will be called upon to document locations, photograph sites, and identify certain characteristics of all wetlands within a small watershed or subbasin. This information will be collected monthly or bimonthly and maintained in a central database. It will serve to inform agencies of wetland status, educate citizens, arid improve wetland stewardship.

Key Points

- ▼ Public support is instrumental in any wetlands preservation effort.
- ▼ Negotiations with landowners can take time and require good listening skills.
- ▼ A volunteer effort focused on specific preservation program needs can address several key areas such as:

  - Landowner and community outreach
  - Monitoring neighborhood wetlands
  - Fundraising
  - Promoting the program through advertising and education
  - Establishing wetland projects for site cleanup, management, and stewardship.

- ▼ Advertise program successes and publicly thank those who participate.

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Appendix A

Resources

Periodicals and Newsletters

 *Indicates reference pertains specifically to Washington State.*

The Back Forty. Published 10 times each year by the Land Conservation Law Institute. Available from Land Trust Alliance, 900 17th Street NW, Suite 410, Washington, DC 20006-2501. [Presents current developments that may affect land conservation, such as taxation, real estate, land use, and exempt organization law]

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Common Ground. Published bi-monthly by The Conservation Fund. Available from The Conservation Fund, 1800 N. Kent Street, Suite 1120, Arlington, VA 22209. [Presents latest conservation news]

Exchange. Published quarterly by the Land Trust Alliance. Available from Land Trust Alliance, 900 17th Street NW, Suite 410, Washington, DC 20006-2501. [Provides information on land trust activity nationwide and serves as a forum for news of local efforts]

The Grantsmanship Center News. Published bi-monthly by The Grantsmanship Center. Available from The- Grantsmanship Center, 1031 S. Grand Avenue, Los Angeles; CA 90015. [Journal of "how to" articles on fund-raising topics]

National Wetlands Newsletter. Published bi-monthly by the Environmental Law Institute. Available from Environmental Law Institute, 1616 P Street NW, Suite 200, Washington, DC 20036. [Provides the latest information on wetlands protection and management, and current political issues]

The Nature Conservancy News. Published bi-monthly by The Nature Conservancy. Available from The Nature Conservancy, 1815 N. Lynn Street, Arlington, VA 22209.

Restoration & Management Notes. Published semi-annually by the University of Wisconsin. Available from University of Wisconsin-Madison Arboretum, 1207 Seminole Highway, Madison, WI 53711. [Provides research information on restoration and management techniques].

Scenic Hudson's Greenway Factsheet(s). Published by Scenic Hudson. Available from Greenway Coordinator, Scenic Hudson, ` Inc., 9 Vassar Street, Poughkeepsie, NY 12601. [Series of eight factsheets covers, walkway design, trail construction, volunteers, fundraising, historic preservation, starting a land trust, land preservation techniques, and liability]

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Appendix B

King County Wetlands Preservation Program: A Preservation Model

Note: Several of the tools and ideas presented in this guidebook have been applied by King County's Wetlands Preservation Program. Others will be applied as the program evolves and grows.

The tools presented in this appendix reflect the specific needs and circumstances in King County. Under a different set of needs and circumstances, other local governments could take entirely different approaches to wetlands preservation.

Background

King County has long recognized the importance of protecting wetlands. The county has also rec6gnized the need to augment existing regulatory programs with non-regulatory ones to better address wetland system viability and to provide for aesthetic, recreation, and wildlife values of wetlands.

King County was one of the first counties in the state to conduct a wetlands inventory and implement strong regulatory programs. In addition, the county has adopted a goal of no net loss of wetland function or value. This goal appears in the amendments to the county's Sensitive Areas Ordinance (Number 9614, Title 21.54 of the King County Code), adopted in September 1990, and is consistent with state policies presented in Governor Gardner's Executive Orders 89-10 and 9a-04. The goal is also consistent _ with federal policies for wetlands protection.

The King County Wetlands Preservation Program (KCWPP) currently directs county agencies to continue and expand nonregulatory activities for wetlands protection. It provides a framework for a complete wetlands preservation program and provides guidance to achieve greater coordination within the county's existing wetlands protection efforts. The preservation program is designed to complement, not replace, regulatory programs that protect wetlands.

Program Design and Adoption

In 1990, an interagency committee was formed to assist in the identification and description of wetlands preservation options and their applicability to local governments in Washington State. This committee included representatives from cities and counties throughout the state, the U.S. Environmental Protection Agency (EPA), Washington State Department of Ecology, The Trust for Public Land, and several King County agencies. Committee members also worked to develop a set of goals for KCWPP, which were reviewed and refined by the managers of all affected King County agencies.

Design of KCWPP was developed by the King County Environmental Division with the coordination of the County Assessor's Office, Washington State University-King County Cooperative Extension, the newly-formed Office of Open Space, and the Parks, Real Property, and Surface Water Management divisions. A primary issue raised by all parties was the need to coordinate regulatory and non-regulatory programs for wetlands protection. Skills and responsibilities for implementing the program were assessed, and the county determined that many of the implementation tools, expertise, and resource options identified were already available in various county departments:

- Staff of the county's Office of Open Space and Parks and Real Property divisions participate in land acquisition approaches and fundraising.

- the Parks Division is already responsible for site management of park lands.

- The Office of Open Space is responsible for administering a recent voter-approved, multi-million dollar bond for the purchase of select open space properties, including some wetlands.

- The Real Property Division holds title to a variety of parcels, including foreclosed lands and open space within subdivisions.

- The Environmental Division of the Parks,, Planning, and Resources Department created the wetlands assessment methodology and conducts wetlands inventory work (described in the inventory section of this appendix). The Environmental Division is responsible for resource land management and the development of King County's Sensitive Areas Ordinance. They have also spearheaded research on the effects of stormwater on wetlands, which has contributed important information about the functional nature and management needs of Puget Sound systems.

- The Building and Land Development Division is responsible for regulatory implementation.

- The Surface Water Management Division of the county's Public Works Department deals with basin planning and provides capital improvements for surface water within the county. Staff also have expertise in habitat restoration. This division has an active public information program on nonpoint source pollution issues and have entered into a partnership-with the nonprofit Adopt a Beach organization.

- The County Assessors Office is responsible for applying King County's Current Use Taxation Program. Under this program, owners of qualified land who agree to keep it as open space are offered property assessments commensurate with the current "undeveloped" state. °-

- Washington State University-King County Cooperative Extension's Land and Water Master Stewards Training Program provides citizen involvement and education.

Although all of these program activities could be included in program components of a wetlands preservation program, they had not previously been applied as such. In addition, an overall program structure to facilitate wetlands preservation within the county was lacking. A policy package to guide activities and encourage a greater use of non-regulatory tools specific to wetlands protection was also needed.

Through discussions with the staff of the various King County divisions, a policy package was developed. Managers of these divisions were briefed on the proposed wetlands preservation program, interdivisional program relationships were addressed, and concerns were resolved and incorporated into a final policy package. After briefing the King County Executive on. the preservation program; the policy package was formally transmitted to the King County Council.

Members of the Council's Open Spaces, Parks, and Natural Resources Committee recommended minor changes (with which the Executive staff concurred) and, passed out of committee, the policy package was unanimously approved as Ordinance 10143 on October 21, 1991. Ten days later, the King County Executive signed the ordinance, establishing the first county-wide wetlands preservation program in the state. The ordinance is included as part of this appendix.

Program Administration and Coordination

The policy package provides direction and emphasis on wetlands preservation. In accordance with the preservation program's intent, divisions are to continue to perform their existing roles not create new ones. By designating a program coordinator, ' program oversight and uniform and complimentary application of the policies can be ensured. It is also the intent of the program to pursue partnerships, when appropriate, with existing, credible land trusts and other non-government entities.

KCWPP identifies the Environmental Division as the responsible entity for coordinating implementation of the program's policies. Coordination is to be accomplished in consultation with county agencies that have statutory authority or existing wetlands protection programs. These agencies include the Washington State University-King County Cooperative Extension, Office of Open Space, and Parks, Real Property, and Surface Water Management divisions.

It is anticipated that coordination and oversight will take approximately two months of staff time per year for the first two to three years of the program. Depending on the rate of-acquisitions and the pace of program development (both of which are impossible to predict at this time), the amount of staff time required to coordinate program efforts may increase. The Environmental Division is responsible for assessing the effectiveness of this program after its first two years of operation and every five years thereafter.

Inventory

It was not necessary to develop a separate wetlands inventory effort for KCWPP, because King County had already conducted an inventory, which included descriptive elements about wetland functions, in the 1980s. The initial 1981,inventory covered 800 square miles and contained data collected at 867 of the 1200 sites visited. This effort required 31 staff months of a professional planner's time, 11 staff months of a professional biologist's time, 17 months of a graphic assistant's time, and 3 months of clerical time (not including keypunch and computer time). An additional $750 (in 1981 dollars) was spent on field equipment.

By 1983, the inventory process had resulted in two products: a map folio showing the locations of all wetlands that had been inventoried, and a set of books containing detailed information and an aerial photo of each wetland analyzed in depth. The scale of the map folio is 1:24,000; 1:200 for the set of books. Only a subset of the wetlands shown in the folio are included in the inventory books.

The inventory methodology used by King ;County is described in .the Wetlands, Inventory Notebooks and in the paper, "Methodology for the Inventory and Evaluation of Wetland Habitat in King County" (1986). The methodology uses the following categories to assess wetland functions and values:

- Hydrology (runoff storage potential, water quality, flood control)

- Biology (quality of habitat, abundance and diversity of species)

- Visual (diversity and contrast of wetlands and surrounding landforms)

- Cultural (access, proximity to -schools, overall environmental quality)

- Economic (peat, anadromous or game fish, game birds, or mammals).

These categories were used to evaluate and rank each wetland, both within its subbasin and county-wide. Inventoried wetlands were also rated, using an approach that divides wetlands into three classes. These classes are used as ratings by the county to implement its Sensitive Areas Ordinance and other wetlands policies.

In 1989, the inventory was updated at a cost of approximately $60,000. By 1990 a total of 884 wetlands, representing 17,039 acres and covering all the unincorporated areas of the county (excluding forest resource lands) had been inventoried. Information from the inventory is currently being loaded into a computerized Geographic Information System (GIS).

Site Selection

KCWHP includes general criteria for selection of sites for preservation. These criteria are presented in the policy package at the end of this appendix.

To select sites, a working list of potential sites for action will be developed. First, the county's GIS will be used to identify wetlands with high ecological values. In addition, sites not identified by the GIS system may be proposed by other agencies or the public: From this pool of sites, further screening will be done by the Environmental Division. Any non-inventoried sites or those that have been proposed for action by other agencies will be evaluated jointly by the agency that nominates the site and the Environmental Division.

To create a target list of sites identified for immediate preservation, other criteria (also outlined in the policy package) will be used. However, as a practical matter, specific circumstances and immediate opportunities may dictate the order in which sites are acted upon. Selection criteria will be applied to all sites, regardless of whether they are purchased, accepted as donations, or targeted for other preservation actions. These same criteria will also be used for recommending potential sites for action by citizens' groups and other parties.

Sites that require extensive restoration are unlikely to be chosen during the early years of the program because extensive restoration requires higher financing. Restoration of wetlands could also be addressed in the future under a specific wetlands restoration program.

Acquisition

KCWPP does not endorse preservation through any one acquisition option. Instead, for each situation, program policies allow staff to chose whatever acquisition method will best meet the goals of the program.

Three King County agencies have the authority and experience to conduct property acquisitions. They are the Parks Division, Real Property Division, and Public Works Department. The most appropriate agency to conduct an acquisition is determined on a site- by-site basis. Such determinations, will depend on the attributes of the site, type of funding, type of acquisition method to be used, and intended form of management. Land trusts may also be involved in acquisition, and would work closely with the lead agency. All land acquisitions will be evaluated in conjunction with the Environmental Division as part of the site selection process described earlier.

The policy package states that, prior to any acquisition, a financial plan must be prepared. This financial plan should indicate how site management and maintenance will be funded. Site management could also be provided under a cooperative management agreement between the county and a non-profit land organization.

As KCWPP evolves, a greater effort may be made to solicit donations. Donated lands will be evaluated with the same criteria that are used for all other acquisitions. The Environmental Division is preparing a brochure that describes the wetlands preservation program for the general public. This brochure will contain information for people interested in donating wetlands to the county.

Site Management

According to the policy package site-specific management plans must also be prepared for all new acquisitions. These plans identify the actions needed to protect or restore a site, the types of activities and facilities allowed in the area, and any required monitoring of the site.

Management plans will be prepared by the custodial agency, with the advice and review of the Environmental Division. The Environmental Division also has oversight authority on implementation of management plans.

Each management plan will identify the parties responsible for management, maintenance, and monitoring of an acquisition. Monitoring of easements that are acquired will also be detailed in a management plan. Contractual responsibility for management, maintenance, and monitoring could be given to a land trust or other non-profit group.

The KCWPP policy package also directs county agencies to be good wetland stewards of lands already in county ownership. Toward that end, the Parks Division is already performing an inventory of parks properties with wetlands. Once this inventory is completed, additional-steps can be taken to assess wetland functions and identify any management strategies that should be changed to better protect wetlands.

Natural lands require different management techniques than those of traditional recreational parks. As more natural areas are acquired by the county's Parks Division and Office of Open Space, the need to change management practices has become evident. Kung County will soon be proposing special training on natural lands management for maintenance personnel and project administrators. The knowledge and perspectives acquired through such training will help address the need for resource management of county wetlands.

Funding and Incentives

KCWPP recognizes that funding will be a continuing need of the program. The policy package encourages all county agencies to pursue opportunities for funding preservation projects. Different types of preservation projects may require different sources of funding. In addition, the use of volunteer labor and expertise will not be overlooked.

An array of incentive programs is offered under the regulatory programs of King County. Under current regulations, the development density that is allowed under zoning may be transferred from a wetland buffer to another part of an individual's property.

It should be noted that the county will reassess wetlands and other properties affected by the regulatory program for sensitive areas protection. Administrative rules that implement the county's regulatory program are currently being drafted. When the rules are completed, properties with wetlands will be reassessed to reflect any development restrictions that are due to regulation. Using GIS, data on wetlands locations will be overlaid on mapped ownership data from the assessor's office to target the appropriate reassessment areas.

Currently, the Office of Open Space is working with other county agencies to develop a "public benefit rating system" under the existing Current Use Taxation Program administered by the County Assessor's Office. Provisions for wetlands protection may be incorporated and applied to the wetlands preservation program.

Education and Citizen Involvement

Wetland preservation policies encourage county agencies to continue and expand current activities in education and citizen involvement. For example, the Washington State University-King County Cooperative Extension recently conducted a course in wetland stewardship. This program produced a number of highly trained volunteers who, in exchange for their training, have each committee! to perform 100 hours of community service. It is hoped that this program will be ongoing. The Environmental Division has also proposed to sponsor in-house training in wetlands management-for Parks personnel.

Another valuable method for promoting public involvement is to make technical information available. Staff are frequently called upon to speak to citizens, elected officials, and other individuals and groups about wetlands. In addition, staff from several divisions provide technical information in response to individual requests. These services will continue under the preservation program.

A public information brochure that describes the preservation opportunities under KCWPP has been prepared for general distribution. County staff will be available to answer questions from the public about the various elements described in the brochure. In the future, the new Environmental Education Unit of the Environmental Division may provide wetland information and education services for the preservation program.

Model Program Demonstration

Whispering Firs Bog was chosen as a demonstration site for KCWPP because it contained the following program elements: cooperation between the county and private groups, interdepartmental cooperation, innovative maintenance agreements; innovative funding strategies, education programs, volunteer programs, conservation easements, and fee-simple ownership. Each of these elements is described in the following sections.

Background

Whispering Firs Bog is an ecologically unique wetland site on Vashon Island. It is identified in the King County Wetlands Inventory as East Vashon #15, a high-quality (Class I) wetland: Currently, the bog is virtually undisturbed; a rarity among bogs of the Puget Sound Trough. The bog is located in a small, primarily rainwater-fed drainage basin. Therefore, it should be feasible

to provide long-term protection to the bog against the impacts of off-site activities.

Whispering Firs exhibits a classic bog structure, with a sphagnum moss mat surrounded by an open water moat. The open water moat is surrounded by a narrow wetland fringe, which is also surrounded by the upland portions of the basin. There are currently a number of small, stunted hemlock trees (approximately 6 to 10 feet tall) growing on the sphagnum mat. The age of these trees has not yet been determined. Species lists are currently being compiled for the site.

Forming a Partnership

Whispering Firs Bog was brought to the Environmental Division's attention by members of the Vashon-Maury Island Land Trust, who had worked previously with county staff on a forestry project. The Vashon-Maury Land Trust is a reputable organization with operations that conform to the standards established by the Land Trust Alliance.

Whispering Firs Bog was selected over several other potential demonstration sites after it was determined that the site met the criteria of the policy package and fit the time frame and project funding. County staff visited the bog to verify that it had not been degraded since the original inventory and thus would still receive a. Class l rating.

Members of the Environmental Division met with the Vashon-Maury Island Land Trust early in the process, ensuring that both groups could work together comfortably. Impressed by the land trust's good track record and large, active, and enthusiastic membership base, the county entered into a partnership with the land trust for this project.

Securing the Bog

Parcels of land surrounding the Whispering Firs Bog are held by five separate landowners. One of these, a 5-acre parcel, has been purchased by the Vashon-Maury Island land Trust. Another 2 1 /2acre parcel (which includes a portion of the bog) was purchased with grant funds by the Office of Open Space. Both of these parcels include sizeable upland buffers.

To determine the most appropriate options, the land trust is working with the owners of two other parcels, who are sympathetic to protection of the bog. Recently, EPA staff worked with the land trust to delineate wetland boundaries of the bog. The land trust is using the results of this delineation to educate these landowners. The Trust believes that by educating landowners about the bog, the land trust, and preservation options, these individuals are likely to become even more supportive of bog protection and be willing to take permanent action to protect the bog.

The land trust and the Office of Open Space have tried unsuccessfully in the past to purchase the fifth parcel, which includes some freshwater wetland fringes and buffer areas of the bog. However, the parcel's current owner is unwilling to self it or to consider other options at this time. For the present, the increased attention that this project has focused on the bog and the level of citizen interest in the area has ensured that regulatory protection will be implemented and enforced. An opportunity to secure more permanent protection of this parcel may arise in the future.

Management

Management and maintenance of the property will be the responsibility of the land trust, in accordance with a cooperative management agreement currently under negotiation. The parcel ,purchased by the county and the parcel owned by the land trust would-be managed as a single unit, with conservation easements placed on both parcels. The county will hold the easement on the land trust's parcel, and the land trust will hold the easement on the county's parcel. Each party will also hold a right of first refusal to the other's property.

This strategy will ensure that if the land trust is unable manage the bog, the county can purchase the land trust's parcel and both parcels will continue to be managed as a single unit. If policies change and a decision is made to sell the county's parcel, the land trust will have the first opportunity to purchase this land. The conservation easements placed on both parcels will ensure that, even if sold to a third party, the land-will not be developed.

Education and Citizen Involvement

The land trust's broad base of community support has enabled it to completely finance the purchase of its 5-acre parcel through donations and sales of T-shirts and baked goods. After this parcel was purchased, volunteers removed several ramshackle structures v and hauled debris away from the site.

The land trust has obtained commitments from a variety of organizations and individuals with expertise in legal, ecological, and educational issues. These commitments of labor, materials, and technical expertise will help to rehabilitate the upland portions of the site and achieve the land trust's goal of long-term protection
for the bog.

The land trust will conduct educational programs on the purchased ,land for school children and county residents. For example, students of an elementary school near the bog will benefit most directly from these programs. A shelter on the parcel purchased by the county could be used to house permanent educational displays. To improve this structure, roofing materials will be purchased by the county and licensed contractors will work as volunteers for the land trust to do the work. A fence, gate, and educational signs will be obtained and installed using similar methods.

October 16, 1991
CL:KS:jad

Introduced by: Bruce Laing
Lois North
Audrey Gruger
Greg Nickels

Proposed No.: 91-779

ORDINANCE NO. 10143

AN ORDINANCE adopting the King County Wetlands Preservation Program.

THE KING COUNTY COUNCIL HEREBY FINDS THAT:

1. Wetlands serve several critical natural functions including wildlife and fisheries habitat, water quality protection, flood protection, shoreline stabilization, stream flow, and ground water recharge and discharge. In many situations these functions cannot be adequately replicated or replaced once the wetlands is damaged or destroyed.
2. The King County Council has recognized the importance of wetlands through the adoption of a strong regulatory program, which includes a goal of no-net loss of wetland functions and values.
3. Regulatory programs are only one piece of a comprehensive wetlands protection strategy. Both regulatory and non-regulatory programs are necessary in order to meet the goal of no-net loss of wetland functions and values. Non-regulatory programs improve the effectiveness of regulatory efforts.
4. King County engages in many activities that would be included in a comprehensive wetlands preservation program, including but not limited to educational programs for citizens and staff, volunteer projects, informational activities, site management of wetlands already in County ownership, and some limited acquisitions.
5. The King County Wetlands Preservation Programs establishes procedures and guidelines for a non-regulatory wetlands preservation program.

10143

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. The Executive proposed 1991 King County Wetlands Preservation Program, attached to Ordinance 10143 as Appendix A, is hereby adopted in order to establish procedures and guidelines for implementing King County's existing wetland preservation goals and policies.

INTRODUCED and READ for the first time this 7th day of October, 1991.

PASSED this 21st day of October, 1991.

KING COUNTY COUNCIL
King County, Washington

Lois North
Chairman

ATTEST:

Gerald A. Peterson
Clerk of the Council

APPROVED this 1 day of November, 1991.

King County Executive

King County Wetlands Preservation Program

King County Environmental Division
Resource Planning Section

October, 1991

EXECUTIVE PROPOSED KING COUNTY WETLANDS PRESERVATION PROGRAM

16 OCTOBER 1991

INTRODUCTION

The King County Wetlands Preservation Program 1) encourages effective and expanded use of existing non-regulatory management tools to preserve wetlands; 2) provides criteria for site selection and management; and 3) designates the Environmental Division as the coordinator for program implementation.

Protection of wetlands can be provided by regulations, zoning restrictions and non-regulatory tools. The Wetlands Preservation Program focuses on the non-regulatory aspect of wetland protection. Wetlands preservation is not accomplished simply through fee-simple acquisition. The King County Program involves the use of tax incentives and other funding programs; citizen involvement and education; donations and purchases; and preservation partnerships with government and non-government groups.

These options, and others, are described in detail in the Washington Department of Ecology's 1991 publication "Wetlands Preservation For Local Governments: A Guidebook" (hereafter referred to as the Guidebook). This Guidebook, jointly prepared by King County and the Department of Ecology, also discusses the implementation of the King County Program as a model for Guidebook users.

This program is designed to guide County actions when wetland preservation is the primary objective. When wetlands are preserved as a byproduct of other County actions, such as the acquisition of parks and open space, or management of surface water, application of the policies of this program should be jointly defined between the Environmental Division and the pertinent custodial agency.

The Wetlands Preservation Program complements the protection of public health and safety furnished by the existing regulatory system through provision of additional public benefits such as public access and opportunities for education, recreation, and research. Wetland protection provided by existing regulations and this preservation program together will help King County achieve the goal of no-net-loss of wetland values and functions.

Executive Proposed
King County Wetlands Preservation Program
16 October 1991

GOALS

The goals of the King County Wetlands Preservation Program are to:

1) Preserve wetlands of local, regional, or statewide significance for future generations;

2) Complement other wetland protection programs by contributing to the County's goal of no-net-loss of wetland functions and values;

3) Protect the critical interaction between wetlands and other parts of the larger ecosystem of the County;

4) Encourage wetlands preservation by County agencies and the public.

5) Promote public awareness and support for wetlands protection programs.

Executive Proposed
King County Wetlands Preservation Program
16 October 1991

PROGRAM COMPONENTS

PROGRAM MANAGEMENT

The Environmental Division of the Parks Planning and Resources Department shall be responsible for coordinating implementation of the policies of this program, in consultation with county agencies with statutory authority or wetland preservation programs. Those agencies include, but are not limited to, the Office of Open Space, Parks Division, Real Property Division, Cooperative Extension, and Surface Water Management Division.

The Environmental Division shall assess the effectiveness of this program after the first two years and every five years thereafter.

PURPOSE

POLICY #1: The King County Wetlands Preservation Program must complement the existing wetland regulatory system and zoning restrictions. Where County acquisition of a wetland is determined to be the appropriate preservation tool, it should be done to secure public benefits such as research; public access, recreation or education; or the protection of a highly significant wetland which cannot sustain the impacts of development that would be permitted by County regulations.

To be considered for preservation under this program, a wetland should furnish public benefits not protected by regulations and zoning restrictions. Such public benefits include public access, and opportunities for education, recreation and research.

EXISTING NON-REGULATORY PROGRAMS

POLICY #2: All County agencies are encouraged to expand their application of existing non-regulatory tools to preserve wetlands.

King County has already implemented or had experience using preservation tools as part of existing non-regulatory programs in several departments. Opportunities to promote or implement wetlands preservation should be used when practicable with the assistance of the King County Environmental Division, and other agencies such as the Washington Department of Ecology, and the U.S. Environmental Protection Agency.

FUNDING

POLICY #3: All County agencies are encouraged to pursue funding opportunities for wetland preservation projects.

A continuing need in this program will be funding to implement aspects of the Wetland Preservation Program. Long-term maintenance funds, in particular, will be necessary.

There are a wide variety of funding sources and creative ways to use limited funds effectively. Volunteer projects which can be implemented with volunteer labor and minimal input of capital funds may still require staff time. The Guidebook has a list of funding sources and recommendations.

PARTNERSHIPS

POLICY #4: The County is encouraged to seek opportunities to facilitate the formation of partnerships between appropriate agencies, property owners and citizen groups in order to further the goals of this program.

Partnerships or cooperative agreements between property owners, citizen groups such as land trusts and non-profit organizations, and government agencies can maximize cooperation and coordination and minimize cost. Partnerships without direct County participation can be effective in meeting the goals of the Program. Partnerships may involve a pooling of resources for site selection, management, acquisition, or an exchange of information and expertise.

Before entering into partnerships, the County should be sure that (a) non-profit organizations meet the criteria outlined for non-profit groups in the Ecology Guidebook, and (b) partnership agreements comply with legal requirements specified by the Office of the King County Prosecuting Attorney.

Executive Proposed
King County Wetlands Preservation Program
16 October 1991

ECOLOGICALLY SIGNIFICANT WETLANDS

POLICY #5: Wetlands preserved in this program should be ecologically significant as demonstrated by a Class I or II rating or by the presence of ecological values not considered by the rating process and have the capacity to sustain functional viability.

This policy focuses financial resources on ecologically significant wetlands. Wetlands should be considered ecologically significant if current site conditions would result in a rating of #1 or #2 according to the King County Sensitive Areas Ordinance or they possess ecological values not considered by the rating process. Functionally viable wetlands are those that are capable of sustaining their natural functions and values over the long-term. Site evaluation should be conducted by the Environmental Division and the custodial agency.

WETLAND BUFFER SIZE

POLICY #6: Wetlands preserved in this program should include sufficient buffers to sustain a functionally viable wetland.

Buffers are designated areas adjacent to wetlands which sustain the long-term functional viability of wetlands. For wetlands considered under this program, buffers should be determined on a functional basis and may be larger than regulatory buffers.

Adequate upland buffers should be provided to accommodate adjacent land uses, linkages with other wetlands and ecosystems, ecological sensitivity of the site, public access, and land requirements for educational, recreational, or research programs. The need to restrict intrusion in order to minimize ecological damage should be carefully assessed since buffer widths may need to be widened to accommodate public benefits such as trails.

FINANCE PLAN

POLICY #7: To facilitate proper wetland management and maintenance, wetlands preserved under this program should have a finance plan identifying a funding source or a cooperative arrangement with an agency, a land trust or other group, to provide for long-term stewardship.

Stewardship includes both management and maintenance of wetlands owned in fee-simple ownership and regular monitoring of easements and deed restrictions.

SITE SELECTION

POLICY #8: Candidate wetlands which satisfy all prerequisites of policies #1,5,6 and 7 should be evaluated for preservation based on the following criteria:

a) Significance of public benefits

b) Linkages to other open space systems;

c) Threat of development;

d) Regional or community needs;

e) Environmental and legal liabilities;

f) Management and maintenance costs;

g) Funding availability; and

h) Other pertinent site-specific factors.

These selection criteria should be evaluated jointly by the Environmental Division and the pertinent custodial agency.

SITE MANAGEMENT PLAN

POLICY #9: A site management plan should be prepared for wetlands preserved under this program.

Site management plans should include a) actions required to protect and enhance wetland functions; b) areas open to public access, and the activities and facilities allowed in those areas; c) monitoring needed to reveal any violation of deed restrictions in cases of less-than-fee ownership and to educate new landowners about those restrictions. Management plans should be evaluated periodically.

CITIZEN INVOLVEMENT

POLICY #10: The County is encouraged to support citizen involvement in wetland preservation by sharing technical expertise, continuing outreach programs, supporting volunteer projects and activities, and assisting private groups in securing state and federal funding.

Public support is crucial to the success of any comprehensive wetland preservation program. Cooperating with non-profit and community groups, aiding them in their efforts, and coordinating County wetland preservation activities with privately sponsored activities is encouraged to make private efforts a major component of wetlands preservation.

EDUCATION

POLICY #11: The County should continue to educate interested citizens in wetlands preservation.

Educational programs can result in highly trained community leaders who can initiate and lead citizen involvement projects with a minimal expenditure of public resources. Citizen groups can often achieve successful wetland protection on their own initiative if provided with adequate information. Informed citizens are also invaluable natural resource stewards who can keep the County informed about environmental problems or preservation opportunities.

INCENTIVES

POLICY #12: The County should develop and implement incentive programs to motivate wetland owners to become wetland stewards.

Incentive programs, such as density bonuses or a public benefit rating system for Current Use Taxation, are commonly used in to encourage landowners to become stewards of specific resources. The Guidebook has a listing of incentive program options.

Executive Proposed
King County Wetlands Preservation Program
16 October 1991

COUNTY WETLAND STEWARDSHIP

POLICY #13: The County is encouraged to set an example of good wetland stewardship by preparing and implementing site management plans for County-owned wetlands.

The County already owns many properties that contain wetlands. Some of these wetlands are managed by plans developed under existing mandates while others have no management plans. Additional public benefits may be gained on County-owned wetlands by adopting management practices which enhance wetland values and functions.

This program encourages wetland stewardship by working with existing policies and programs of custodial agencies. Resources directed at wetlands preservation should not displace management and maintenance funds needed elsewhere. To the degree practicable the Environmental Division should work with custodial agencies to assist in current or planned efforts to inventory, rank, and develop management plans for county-owned wetlands.

Appendix C

Funding Sources

The programs outlined below may provide funds to local government for wetlands acquisition and public education and involvement. This list represents principal programs that are available at this time. Although some of the grants may have geographical restrictions, many are available for projects throughout the state. - The purpose, eligible projects available funds, and contact information are described for each program. The section is arranged by administering agency, under the broad headings of federal, state, and foundation grants and volunteer programs. Program requirements change often, as do funding levels. Current information is available from the administering agency

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Federal Grants

U.S. ENVIRONMENTAL PROTECTION AGENCY

Program	National Environmental Education Grant
Purpose	To stimulate environmental education by supporting projects to design, demonstrate, or disseminate practices, methods, or techniques related to environmental education or training.
Eligible Projects	Demonstrative education projects by local or tribal education agencies, colleges or universities, and non-profit organizations.
`Funds	Approximately $2 million, with up to $25,000 available for any single project.
Contact	EPA Environmental Education Grants Application ASCI Environmental Protection Agency 1365 Beverly Road McLean, VA 22101 (703) 847-3036

U.S. FISH AND WILDLIFE SERVICE

Program	Washington State Ecosystems Conservation Project (1990)
Agency	U.S. Fish end Wildlife Service (USFWS) and Washington Department of Wildlife
Purpose	USFWS - protect, restore, and enhance wetlands and riparian resources and upland buffers WDW - acquire and restore key upland habitat areas.

Eligible	Projects Funding and technical assistance for projects on private lands, particularly in the area of restoration and enhancement.
Funds	The current appropriation is $1.5 million, divided between the two agencies.
Contact	John Kerbow U.S. Fish and Wildlife Service Fish and Wildlife Enhancement Office 3704 Griffin Lane, S.E., Suite 102 Olympia, WA 98501-2192 (206) 753-9440
Program	U.S. Fish and Wildlife Service Refuge Acquisition Program
Agency	(USFWS)
Purpose	Purchase of wildlife habitat to be added to the federal refuge system. Priority is given to large sites (or smaller sites close to existing refuges) that support migratory birds, anadromous-fish, and/or endangered species.
Eligible Projects `	Individuals, cities, and state and county agencies may recommend property to the USFWS for acquisition.
Funds	$25 million annually, with about $3 million allocated to the Northwest region of USFWS:
Contact	Marvin Plenert, Regional Director U.S. Fish and Wildlife Service 911 Northeast 11th Avenue Portland, OR 97232-4181 (503) 231-6118
Program	Disaster Relief Act (1972)
Agency	Federal Emergency Management Agency (FEMA)
Purpose	Acquisition of property within a floodplain that recently received severe damage by flooding. Often these areas include wetlands appropriate for preservation.
Eligible Projects	Acquisition of structures and land:
Funds	$5 million annually, distributed throughout the United States.
Contact	Carl Cook Federal Emergency Management Agency Natural Hazards Branch, Federal Regional Center Bothell, WA 98021-9796 (206) 487-4687

State Grants

WASHINGTON INTERAGENCY COMMITTEE FOR OUTDOOR RECREATION (IAC)

The Washington Interagency Committee for Outdoor Recreation (IAC) board of directors includes five citizen members and four state agencies, including the state departments of Fisheries, Wildlife, and Natural Resources, and the State Parks and Recreation Commission. The IAC acronym also applies to the administrative agency for the Board, which provides opportunities for recreation and open space in the state. IAC grant programs administer funds from several state and federal sources to eligible recipients for outdoor recreation,, wildlife, and conservation purposes.

Any municipal subdivision of the state (counties, cities, towns, ports, utilities, parks and recreation departments; and school districts) and Indian Tribes may apply to the IAC for funding. Some municipal corporations and, for some sources of funding, nonprofit organizations and state and federal agencies, are also eligible.

Contact	Larry Fairleigh IAC 4800 Capitol Boulevard , KP-11 Tumwater, WA 98504-5611 (206) 753-7140
Program	Washington Wildlife and Recreation Program
Purpose	To acquire land for purposes of long-term outdoor recreation (Outdoor Recreation Account) and wildlife and conservation (Habitat Conservation Account).
Eligible Projects	Local jurisdictions can apply for funds from the urban wildlife category of the Habitat Conservation Account, which includes projects to acquire wetlands, forests, and other wildlife habitats that provide opportunities for wildlife observation in urban or urbanizing areas. If supported by a state agency, local governments may apply for funding to acquire higher-quality sites.
Funds	$113 was provided when this program was created in 1990. No less than 15 percent of the fund will be available to state and local agencies. A 50-percent local match is required.

Program	Land and Water Conservation Fund
Purpose	To stimulate, encourage, and assist government agencies in creating new and expanded public outdoor recreation areas and facilities.
Eligible Projects	Historically, projects have included development, renovation, and land acquisition for playgrounds, athletic fields, swimming pools, trails, picnic areas, campgrounds, and similar recreational facilities. Recent federal policies that emphasize the importance of wetland protection have also encouraged the use of these funds for wetland preservation.
Funds	In recent years $200,000 or less has been allocated to the IAC for expenditure. The funds, therefore, have generally been put into one project.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

The federal Coastal Zone Management Act (1972) provides grants, administered by the Washington State Department of Ecology (Ecology); for development of coastal management and preservation programs, including planning for the impact of offshore energy development on coastal states. Sections 306 and 315 of this act relate to wetlands preservation funding.

Program	Resource Management Improvement Grant (306A)
Purpose	To fund small (generally $20,000 - $50,000) projects for public access to shorelines or to protect sensitive areas such as wetlands.
Eligible Projects	Projects must be located on or related to a marine water body or its-"associated wetlands," as defined in the state's Shoreline Management Act. Public access improvement projects are given the highest priority. Thurston County received a grant in 1987 to purchase a portion of Woodland Creek, and Snohomish County used 306A funding to purchase Otter Island in 1988.
Funds	Up to $150,000, available annually to cities, counties, and other units within the 15-county coastal zone. A 50-percent match is required. Contact Ecology in December to apply.
Contact	James Scott, Grant Coordinator Department of Ecology Mail Stop PV-11 Olympia, WA 98504-8711 (206) 459-6781'

Program	Coastal Zone Management (306)
Purpose	To fund planning and special projects to implement shoreline master programs.
Eligible Projects	Development of local wetland preservation programs would be eligible under this grant.
Funds	Up to $350;000, available annually to cities, counties, and other units within the 15-county coastal zone. A 50-percent match is required. Contact Ecology in December to apply.
Contact	Steve Craig, Grant Coordinator Department of Ecology Mail Stop PV-11 Olympia, WA 98504-8711 (206) 459-6780 `

Program	The National Estuarine Research Reserve System
Purpose	The Estuarine Sanctuary Program was established under Section 315 of the Coastal Zone Management Act. This is a cooperative program between states and the National Oceanic and Atmospheric Administration for setting aside natural estuaries to provide opportunities for long-term research, education, and interpretation. The reserves are representative of the 27 biogeographical zones of the United States.
Eligible Projects	States sponsor a site by submitting a nomination to the Secretary of Commerce. If the estuary is a desirable example of the biogeographic zone it represents, the state receives funding to establish and manage the reserve.
Funds A	Available at a 50-percent match in the amount of approximately $3 million per state. Presently, Washington's Padilla Bay is the only Research Reserve in the Columbia North Pacific Zone.
Contact	Terry Stevens, Director Padilla Bay Estuarine Research Reserve 1043 Bayview Edison Rd. Mt. Vernon, WA 98273 (206) 428-1558

Program	State Revolving Fund for Water Pollution Control (SRF)
Purpose	To help local governments finance water quality projects. SRF provides low or no-interest loans to local jurisdictions. Although the majority of these funds are allocated for wastewater treatment facilities, 10 percent may be used for estuary management, including estuarine wetlands acquisition.
Eligible Projects	To qualify for assistance, a project must provide a measurable environmental benefit; estuary management projects must conform with the Puget Sound Water Quality Management Plan. In addition, the applicant must secure a dedicated funding source to repay the loan.
Funds	Approximately $41.7 million is available for Federal FY91, with $4.7 million earmarked for the estuary management program. Short-term loans amortized over less than five years carry no interest charge; longer-term loans carry a four- to five-percent interest charge. The fund is being seeded between 1989 and 1994 by annual federal capitalization grants and a 20-percent state match. After this period, the amount available will be determined by the repayment stream for previous loans.
Contact	Dan Filip, Financial Assistance Program Washington State Department of Ecology Mail Stop PV-11 Olympia, WA 98504-8711 (206) 459-6061

WASHINGTON DEPARTMENT OF NATURAL RESOURCES

Aquatic Lands Enhancement Account (ALEA)

The Aquatic Lands Enhancement Account (ALEA) program was established by the 1984 legislature to provide funding for aquatic land enhancement projects. The account is funded from lease revenues received for use of state-owned aquatic lands managed by the Washington Department of Natural Resources.

Annual spring grant program workshops are held at regional locations throughout Washington. In 1990, the application deadline was July 31, but this date may vary from year to year.

Contact	Bob Brandow (206) 586-9033 Judy Giseburt (206) 753-0251 Division of Aquatic Lands, Department of Natural Resources Mail Stop QW-21 Olympia, WA 98504

Program	ALEA Public Access/Recreation Grant Program
Purpose	Under the Public Access Grant Program, ALEA funds are available to state agencies and local governments to acquire lands providing public access.
Eligible Projects	Funds may be used to acquire wetlands that are associated with navigable waterways and where public access will be provided.
Funds	The application process is competitive and requires a 25-percent match. In recent years, the annual funding allocation for this program has ranged from $750,000 to $1 million. The maximum grant is $75,000 per project.

Program	ALEA Interpretive Facilities Program
Purpose	To fund on-site interpretive facilities on aquatic lands, providing public information on natural systems and historical and other cultural features.
Eligible Projects	Construction of interpretive facilities.
Funds	Annual funding is $250,000; maximum grant amount is $30,000 and requires a 25-percent match.
Program	ALFA Local Government Wetlands Program
Purpose	Funds are available to acquire wetland sites for interpretive, educational, and research purposes.
Eligible Projects	Acquisition of wetlands that are associated with navigable waterways. Local community involvement in the project is a major criterion for funding.
Funds	$2-million is available for the biennium. Of these funds, $1 million is dedicated to acquiring conservation areas for state ownership, and $1 million is available to-local government for wetland acquisition. A maximum grant of $250,000 is available per project.

PUGET SOUND WATER QUALITY AUTHORITY

Program	Public Involvement and Education Model Projects Fund (PIE Fund)
Purpose	The 1987 Puget -Sound Water Quality Management Plan established a program to fund a 'wide range of model projects related to Puget Sound that educate and involve a broad spectrum of the public.

Eligible Projects	The PIE Fund supports development of projects to serve as models for public involvement and education, community cleanup, or citizen monitoring related to the protection of Puget Sound. By documenting and evaluating these projects, the Puget Sound Water Quality Authority (PSWQA) can provide an inventory of techniques for groups or communities to use for education and public involvement in water quality protection. Many wetland projects are funded under this program.
Funds	The 1987 Washington State Legislature appropriated approximately $1 million from the Centennial Clean Water Fund for the program during the 1987-1989 biennium; the same amount was appropriated to PSWQA for the PIE Fund for the 1989-1991 biennium.
Other	The annual application period begins early January and remains open approximately 45 days. PSWQA sponsors proposal assistance workshops several months before the proposal deadline.
Contact	Bob Steelquist Puget Sound Water Quality Authority Mail Stop PV-11 Olympia, WA 98504-0900 (206) 493-9300

Foundation Grants

Program	The Conservation Fund
Group	The Conservation Fund
Purpose	To demonstrate that conservation can be good business, by establishing partnerships between business and conservation interests or, governments to conserve valued lands through purchase, planning, and management.
Eligible Projects	The Conservation Fund purchases land for conveyance to others,, administers a "conservation bank" for low-interest loans for acquisition, provides planning services through the "(arid advisory service", and assists with the establishment of non-profit land trusts.
Funds	Varied, administered on a case-by-case basis. -
Contact	The Conservation Fund, Western Regional Office 1244 Pine Street Boulder, CO 80302 (303) 444-4369

Program	Environmental Education Foundation
Group	The National Environmental Education & Training Foundation
Purpose	A public/private partnership to promote and support education and training as necessary tools to further both environmental protection and sustainable development.
Eligible Projects	Information productions, pollution prevention, and training.
Funds	Newly created organization, making project-specific-determinations at this time.
Contact	Brad Smith National Environmental Education and Training Foundation 915 15th St. NW, Suite 200 Washington D.C. 20005 (202) 628-8200

Volunteer Programs

The following two programs are not available to local governments, but may be available to volunteer groups organized by local governments.

WASHINGTON DEPARTMENT OF FISHERIES

Program	Volunteer Cooperative Fisheries Enhancement Program
Purpose	ALEA provides funds each year for the Washington Department of Fisheries to work with volunteers on fish enhancement activities. The Washington Department of Wildlife receives an equal amount under the same funding source to work with volunteers on wildlife habitat enhancement.
Eligible Projects	Activities range from classroom aquaria to net-pen rearing of salmon and habitat improvement projects, including wetland projects.
Funds	Approximately $1 million in funds and/or technical assistance and materials is provided, based on project merit and the availability of funds.
Contact	Rich Kolb Washington Department of Fisheries 115 General Administration Building Olympia, WA 98504 (206) 586-3944

WASHINGTON DEPARTMENT OF WILDLIFE

Program	Volunteer Cooperative Wildlife Enhancement Program
Purpose	The Cooperative Projects Program is funded by ALEA and structured in a manner similar to the Volunteer Fisheries Resource Program.
Eligible Projects	Five categories of habitat enhancement projects are funded. These are listed in descending order of priority: 1) Habitat enhancement 2) Research 3) Facility development 4) Public awareness 5) Artificial production.
Funds	Approximately $1 million in funds and/or technical or materials assistance is provided based on project merit and the availability of funds.
Contact	Dave Gadwa Washington Department of Wildlife 600 Capitol Way N. Olympia, WA 98501-1091 (206) 586-5511