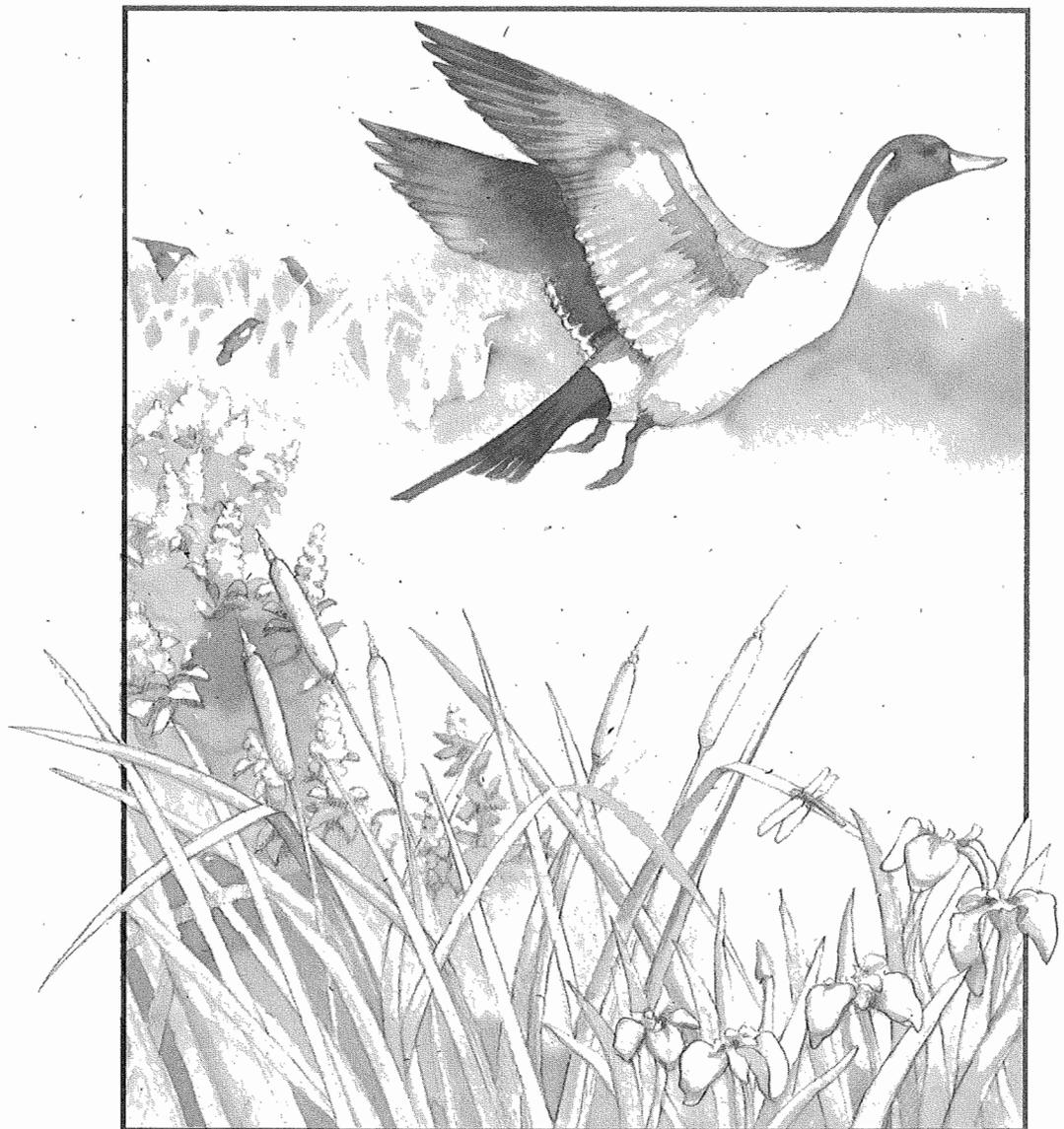


Designing Wetlands Preservation Programs for Local Governments

A Summary

March 1992



*In cooperation
with King County*



Publication #92-19

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About this Booklet

This booklet is a summary of information presented in *Designing Wetlands Preservation Programs for Local Governments: A Guide to Non-Regulatory Protection*, developed by the Washington Department of Ecology (Ecology). Other helpful Ecology documents include *A Guide to Conducting Wetlands Inventories* and *Wetlands Preservation: An Information and Action Guide*. Copies of these publications are available from:

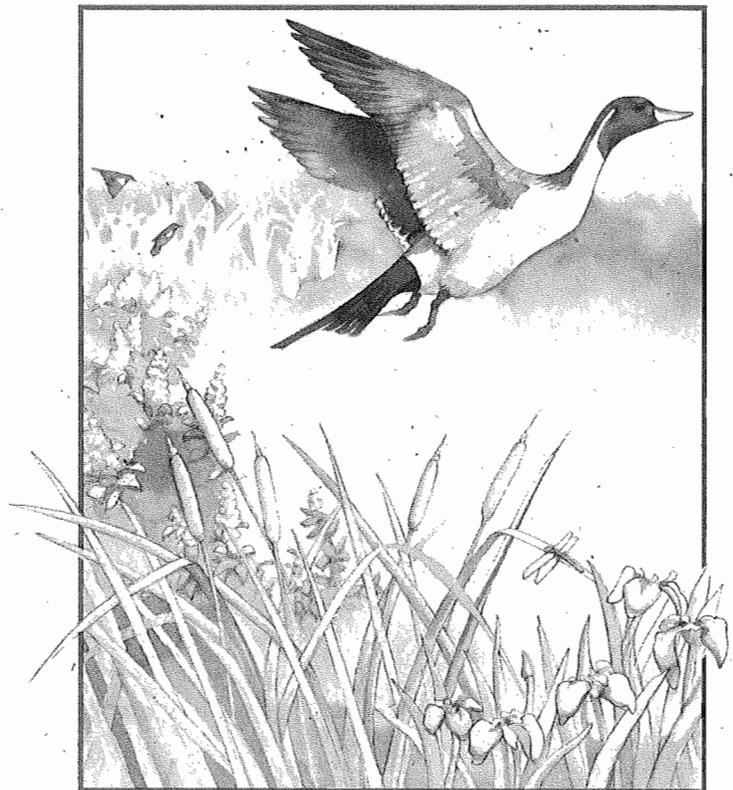
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What is Wetlands Preservation?

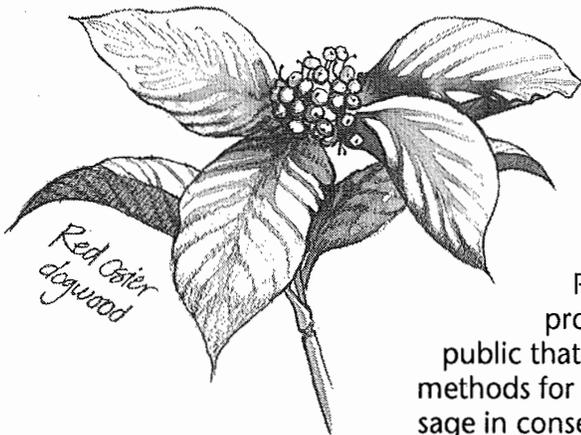
Wetlands preservation is the process of establishing public or private stewardship programs to secure wetlands from development or degradation and to maintain these systems in a natural state. Familiar wetlands preservation programs in Washington include the Migratory Waterfowl Stamp Program of the state Department of Wildlife and the Natural Heritage Program of the state Department of Natural Resources. Wetlands preservation programs have also been implemented by The Nature Conservancy and Ducks Unlimited.

Why are wetlands important?

Wetlands are some of our most productive and valuable natural resource areas. They provide feeding and breeding habitats for fish and wildlife, control erosion and flooding, stabilize shorelines, recharge groundwater, maintain stream flows, and improve water quality by trapping sediments and assimilating pollutants and excess nutrients. Wetlands also provide recreational, educational and scenic opportunities.

Why must wetlands be preserved?

Commercial, agricultural and residential development have taken their toll on Washington's wetlands. It has been estimated that roughly one half of our state's wetlands has already been lost or degraded since settlement. Some parts of the state have experienced much higher losses. In urbanized areas of Puget Sound, wetland losses range from 90 to 98 percent.



To slow and eventually stop any further loss of wetland functions or acreage, both federal and state governments support goals of "no net loss." Using local knowledge and resources, local government can help achieve this goal by augmenting federal and state efforts with wetlands preservation programs of their own.

Preservation programs take a cooperative approach to protecting wetlands. They also demonstrate to the public that local government is actively seeking non-regulatory methods for wetlands protection— an especially important message in conservative jurisdictions, where voters are often opposed to more government regulation. Preservation programs provide other benefits, such as educating people to appreciate the value of wetlands in their area.

Wetlands Regulations Aren't Enough

Many local governments already have regulatory programs to protect wetlands. However, local regulations often fall short if they take site-by-site approaches to protecting landscape attributes. Long-range planning and provisions to permanently protect intact systems are rarely found within regulatory programs.

For the long-term health and maintenance of wetland systems and, ultimately, the human community, methods are needed that provide protection beyond that of a regulatory focus. This is the role of a wetlands preservation program.

Where Does Wetlands Preservation Begin?

Preservation starts with the setting of goals and objectives. The goal-setting process should be made public, possibly with a citizen's advisory committee assembled for this purpose. The goal of no net loss has been endorsed at both the federal and state levels and by some local jurisdictions in Washington State. Other wetlands preservation goals may focus on special interests or needs of the local community.

Objectives define 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.

Evaluate strengths and weaknesses

After setting goals and objectives, it's time to assess the current situation within the jurisdiction. This means determining what components and tools will be needed to make the program work.

Common Goals, Common Vision

Certain concepts should be included in every set of program goals:

- Wetlands of local, state, or regional significance should be preserved so that future generations may enjoy the benefits of wetlands.
- The preservation program should complement and be coordinated with other wetlands and natural resource protection programs of local government, neighboring local governments, 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 units of the landscape.

The Economic Benefits of Wetlands Preservation

Many people believe that purchasing wetlands is costly. In a way, they're right— certain up-front expenses are associated with closing any real estate transaction. But that's just part of the picture. The economic returns from preserving open space lands are considerably greater than the initial acquisition costs. A few good examples:

- Open space provides a variety of amenities, which are often reflected in increased real property values and added marketability for nearby property.
- Reduced costs for pollution control and other public services are among the economic benefits to communities that conserve greenways, rivers, wetlands, and other open spaces. The costs of providing these services to residential development are significantly higher than can be recouped through revenues received.
- Cost reductions in hazards mitigation can also be traced to wetlands preservation. Whenever wetlands are lost, an array of environmental services— including flood and erosion control, water purification, and shoreline stabilization— must be replaced by technologies. These replacement costs are usually borne by both public and private sectors.
- The reduction in noise and the aesthetic values of preserved open space are enhancements to the quality of life within the community. Providing a community with more open space for recreational activities leads to improved personal health, which translates into significant savings in the cost of individual health care.
- Corporations that relocate because of the "quality of life" amenities of open space also contribute benefits— through the support of local business and the new jobs they create.
- Nature-based tourism can bring sizeable amounts of money to a community with wetlands and other undeveloped natural settings for recreational pursuits.

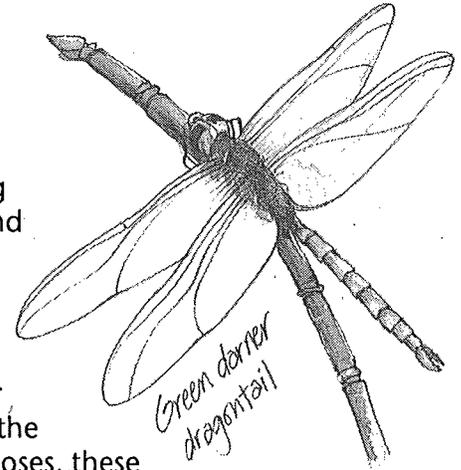
As part of this process, local governments should identify and evaluate all existing regulatory and non-regulatory wetland- or resource-related programs that can be tied into wetlands preservation efforts. What tools, resources, programs, and projects are already in operation? What existing or potential funding sources can be used to support the program?

By modifying existing tools or programs, some gaps in the preservation program can be filled. In other instances, new tools or programs may need to be created. Local government may be surprised by the resources that are already at hand.

Now, draft a plan

A program implementation plan outlines the process with which program goals and objectives will be met. It states the goals and objectives of the program, defines the program's parts, establishes a series of tasks, assigns responsibilities, and sets program parameters. It answers many important questions: What components of

the program will be emphasized and how? Who will be involved and what roles will they play? What efforts will be made to secure and manage the individual sites? What are the funding sources? How will public education and involvement efforts be approached?



Such a plan should also identify how the program's progress will be measured. Establishing milestones for progress helps to focus work toward the specific objectives. For planning purposes, these milestones may be drafted to conform with fiscal year cycles or other convenient time frames.

The achievements of any wetlands preservation program should be evaluated every two to five years to determine whether program goals and objectives are being met. During this evaluation, any changes that will improve the program's effectiveness should be implemented.

Put together a team

The role of lead program administrator should be filled by an experienced resource planner or other staff member with solid planning skills. Without a designated lead, a preservation program may flounder and, consequently, goals and objectives may go unmet.

Any programs that directly or indirectly protect wetlands should be considered part of the preservation team. Key players within a jurisdiction might include the county assessor, parks department, and resource planning, real property or surface water management divisions. For all of these players to work smoothly and

Successes with Land Trusts

Land trusts are ideally suited to preservation efforts on a county-wide scale, protecting land primarily through donations of conservation easements. They are also effective at monitoring lands and enforcing land-use restrictions. Most operate on private, locally generated funds, directly returning the benefits of land conservation to the people that support them. These direct tangible rewards help build a politically involved core of constituents— people with a genuine knowledge of local conservation issues.

Classified as public charities, land trusts usually acquire their holdings through partial or full donations, which, in most instances, yield the same tax benefits to a donor as would a donation to a government agency. More flexible and often more responsive, they can often acquire a piece of property in a fraction of the time required by government. Landowners may also more eagerly assign stewardship of their land to a land trust, whose stated purpose and contractual agreements bind it strongly to habitat preservation.

efficiently, certain issues of coordination and oversight will have to be ironed out. Previous business methods may need to be modified, 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 jurisdiction to protect its wetlands could be undermined by the actions of another upstream. For this reason, coordination among neighboring governments, federal and state agencies, tribes, large businesses, property owners, and other relevant parties is also essential.

Find partners

Partnerships provide for the sharing or pooling of expertise, a move that can conserve resources, streamline efforts and provide political strength. Some of the best partners in preservation are land trusts— private, non-profit corporations dedicated to the preservation of land for scenic, recreational, ecological, historical, or other non-commercial values. In the past few years, the number of land trusts in Washington has mushroomed. A current list of these potential partners is contained in Ecology Publication #90-5, *Wetlands Preservation: An Information and Action Guide*.

What Wetlands Should Be Preserved?

In order to identify which wetlands to earmark for preservation, it is necessary to develop selection criteria. These criteria should reflect program goals and objectives. Typically, they're based on an array of wetlands considerations— hydrological, biological and cultural functions, site conditions, locations, local community needs, liabilities, and management issues pertaining to wetlands.

Preservation From a Landscape Perspective

Wetlands aren't discrete entities. Rather, they're functional parts of a larger landscape ecosystem. Assessing how the different functional parts interact within the context of the landscape is an important part of wetlands preservation.

There are several strong arguments for adopting a landscape approach to wetlands preservation. The first is largely economical: management costs tend to increase as the focus of preservation is narrowed from the ecosystem to the specific systems, communities, populations, or individuals that it contains.

A landscape approach to preservation also supports the identification of regional priorities. With a regional perspective, preserves can be designed that protect the broadest number of wetland species, qualities, and systems. By favoring the development of a network of preserves connected by corridors, the landscape approach can offset the problems inherent in most small preserves— providing opportunities for species to migrate and use a variety of habitat types.

Choosing Selection Criteria

While developing selection criteria, two broad categories should be considered.

Ecological considerations address the functional nature of wetland systems and incorporate provisions to preserve intact landscape features. They include:

- **Wetland Loss**— the relative abundance of existing wetlands compared with their abundance in the past.
- **Distribution**— the spatial arrangement of wetlands within a certain area.
- **Contiguity**— the extent that wetlands are connected with lakes, streams, other water bodies, or undisturbed upland habitats.
- **Ecological Integrity**— a measure of the overall health of the wetland ecosystem and its potential for long-term viability.
- **Size**— indirectly, a measure of the wetland's potential to support certain minimum viable populations of animal or plant species over time.
- **Hydrologic Functions**— separate measures of a wetland's ability to stabilize shorelines, control flooding, provide for groundwater exchange, support downstream flows, and capture and assimilate sediments, nutrients and pollutants.
- **Biological Support Functions**— measures of a wetland's ability to support life: for example, its structure and diversity of habitat types, plant and animal species diversity, and the presence of native communities.
- **Cultural Functions**— attributes such as recreation, education and interpretation, research, aesthetics or open space, and historical or archeological values.

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

- **Wetlands Locations**— indicators of the degree of threat to a wetland from development or rapid population growth or of the importance placed on the wetland's surroundings by political issues, particular open space needs, or other current events.
- **Intra- and Intergovernmental Coordination**— a measure of existing and needed coordination mechanisms among divisions, agencies, jurisdictions, and local governments.
- **Community Needs and Opportunities**— considerations of public interest, the size of the community served, and consistency with any open space or recreation plans.
- **Public Access**— evaluations of availability and desirability of public use.
- **Liabilities**— the identification of underground storage tanks, toxic wastes, surface water management problems, or other hazards at wetland sites.
- **Management and Stewardship Costs**— consideration of all expenses associated with all ongoing and one-time activities, including capital improvements, site restoration or enhancement, site maintenance, and development of management plans.
- **Funding**— determining what money is needed and obtainable for specific preservation actions.



Selection criteria are initially applied as wetlands are inventoried and targeted for preservation. The specific type and number of criteria that are applied at any one time will vary. Generally, ecological considerations are applied to develop a field inventory and initially identify potential preservation sites; managerial and political considerations are used to target specific wetland sites for acquisition.

Create a wetlands inventory

The ecological attributes of all wetlands within a jurisdiction should be carefully evaluated for their preservation potential. To do this, a wetlands inventory must be compiled. The inventory is then used to begin identifying the most significant wetlands within a jurisdiction as targets for preservation.

Development of an inventory is a two-step process. During data collection, information about specific wetland characteristics is gathered from existing sources and in the field. During data assessment, this information is analyzed and correlated (and sometimes assigned scores), providing a measure of the degree that the characteristics are represented by the wetland.

In data collection, the most important wetland characteristics to address are the desirable functional attributes and ecological integrity (viability) of each wetland site. The amount of data collected and the scope of the collection effort are both functions of time, available funds, and the goals of the preservation program.

Assessment methods are also program specific— that is, they are designed to provide the selection results desired by the goals and objectives of the program. The specific criteria that are applied will

Alternate Approaches to Inventorying

For the ideal wetlands inventory, field data would be gathered on every wetland within a jurisdiction. However, because this isn't always feasible, a number of alternate approaches could be taken:

- A "phased" wetlands inventory could be conducted, with portions completed at different times or in increased levels of detail
- Only priority basins, portions of the jurisdiction, or the largest and most obviously diverse wetland areas could be inventoried
- Available inventory data could be used to flag potential wetlands within the jurisdiction for further assessment
- Wetlands could be evaluated on a case-by-case basis.

Of course, there are drawbacks to any of these alternate approaches—including the risk of overlooking some significant sites. Basic techniques for conducting wetlands inventories are contained in Ecology publication #89-60, *A Guide to Conducting Wetland Inventories*.

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 contiguity with other wetlands.

The long-term functional viability of a wetland depends on its ecological integrity—that is, the ability to persist over time without degradation or loss of functions and quality. Functional viability also depends on the interconnectedness of wetlands with other ecosystem components.

The factors that influence ecological integrity and interconnectedness are the presence and adequacy of buffers, water quality and quantity, cumulative impacts, 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. A summary of buffer research as it relates to the protection of various wetland functions is contained in Ecology's report, *Wetland Buffers: Use and Effectiveness*.

greatly influence the initial assessment, determining which wetland sites will be earmarked for preservation.

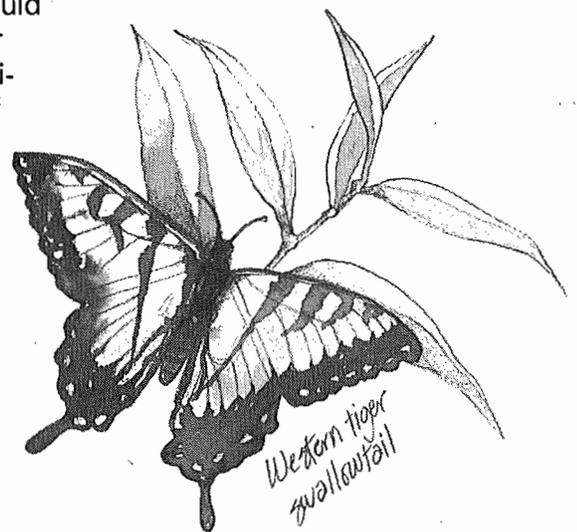
Narrow the list

Once the inventory is completed and all data have been collected and analyzed, a "working list" of desirable wetlands for preservation is available. From this working list, a group of "target" wetland sites can be selected for immediate action.

To select target sites, the criteria from managerial and political considerations must be applied. Such criteria are likely to be more fluid than the ecological criteria, because the information on which they're based is more subject to change.

Acquire wetlands

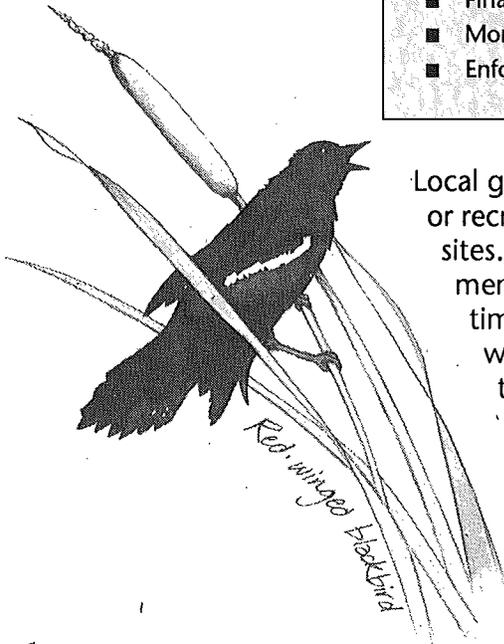
Each year, local government should pursue a number of wetlands for acquisition. To promote competition and improve the chances of obtaining a fair market price, more wetlands should be pursued than could possibly be acquired. For the same reasons, it is not recommended that the acquisition list be prioritized. Individual land transactions will be colored by the resource characteristics and needs, available funds, the landowner's willingness to negotiate and the priorities of local government.



Elements of a Management Plan

The more specific and action-oriented a management plan is, the easier it will be to implement and monitor for effectiveness. A management plan should not just recommend a course of action—it should prescribe the steps for following that course over immediate and longer-term planning horizons. Each management plan should contain:

- Assessment of site qualities and protection needs
- Assessment of level of public use
- Definition of goals and objectives for the site
- Actions to restore or maintain wetland function
- Provisions for public use
- Financial plan
- Monitoring program
- Enforcement procedures.



Local government staff may negotiate directly with landowners or recruit land trusts or citizens' groups to help obtain wetland sites. 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.

Protecting wetland functions may require that full or partial ownership of the wetlands and its buffer be obtained. Full ownership gives the highest degree of control over the land and its uses. However, partial ownership is often sufficient to preserve desired functions and may be preferred for economic and political reasons.

Partial ownership commonly takes the form of a conservation easement. Conservation easements are recorded on the property deed and may include restrictions on development rights while allowing certain activities that are suited to conserving the site's natural features. A designated "holder" is identified to monitor the property and enforce the restrictions for the term of the easement. Under partial ownership, the possibility of litigation or costly capital improvements (because of violations of easement terms) always exists.

Designing and implementing a successful wetlands preservation program requires cash. Some level of financial support will be needed in two major areas: site acquisitions and site management. Many creative funding options are available to local government. Gaining the greatest flexibility and the highest likelihood of program success means taking a variety of approaches, such as

grants, donations, loans, fees, and land sales. The implementation of current use taxation programs, transfer of development rights, and other regulatory and non-regulatory incentives can provide short-term aid to protect quality wetlands.

Provide for site management

For the purposes of preservation, both on-site and off-site activities that might adversely affect wetlands must be controlled. Management plans must be developed that consider the needs of the wetland resource and any proposed uses of the area. Such plans must also specify any actions that will be needed to maintain the functions of the wetlands over the long term.

Garner public support

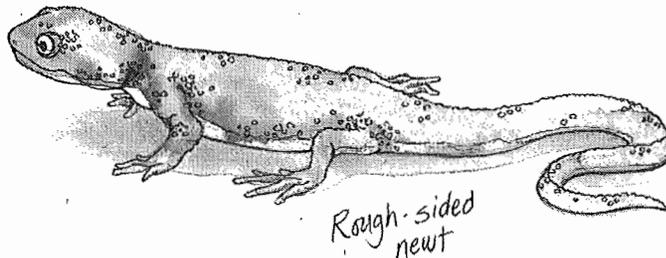
Spreading the word about preservation, collecting information about wetlands, monitoring properties, and helping to raise funds— these are a just a few of the benefits to local governments with active education and public involvement programs.

Within the context of a preservation program, education should focus on meeting specific program needs. Public education efforts may also be designed to promote involvement in volunteer activities. 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.

Public Education and Involvement Goals

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



Can Wetlands Wait Any Longer?

Wetlands preservation is part of a much bigger picture—one that addresses wetlands as key elements of the regional landscape. The time to see this big picture has come. If *your* local jurisdiction lacks a comprehensive wetlands preservation program, then by all means, start working to design and implement one today!

For More Information

Building an Ark: Tools for the Preservation of Natural Diversity Through Land Protection by Phillip M. Hoose. Available from Island Press, Box 7, Covelo, CA 95428.

National Wetlands Policy Forum: Recommendations for Comprehensive State Wetlands Programs. Available from Conservation Foundation, 1250 24th Street NW, Washington, DC 20037.

Private Options: Tools and Concepts for Land Conservation and The Conservation Easement Handbook. Both available from Land Trust Alliance, 900 17th Street NW, Suite 410, Washington, DC 20006-2501.

Staff of the Wetlands Section of Ecology's Shorelands and Coastal Zone Management Program and members of King County's Environmental Division are also available to provide technical guidance to jurisdictions interested in establishing wetlands preservation programs. Contact the Washington State Department of Ecology, Wetlands Section, Shorelands and Coastal Zone Management Program, Mail Stop PV-11, Olympia, WA 98504-8611 (206-459-6836).

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