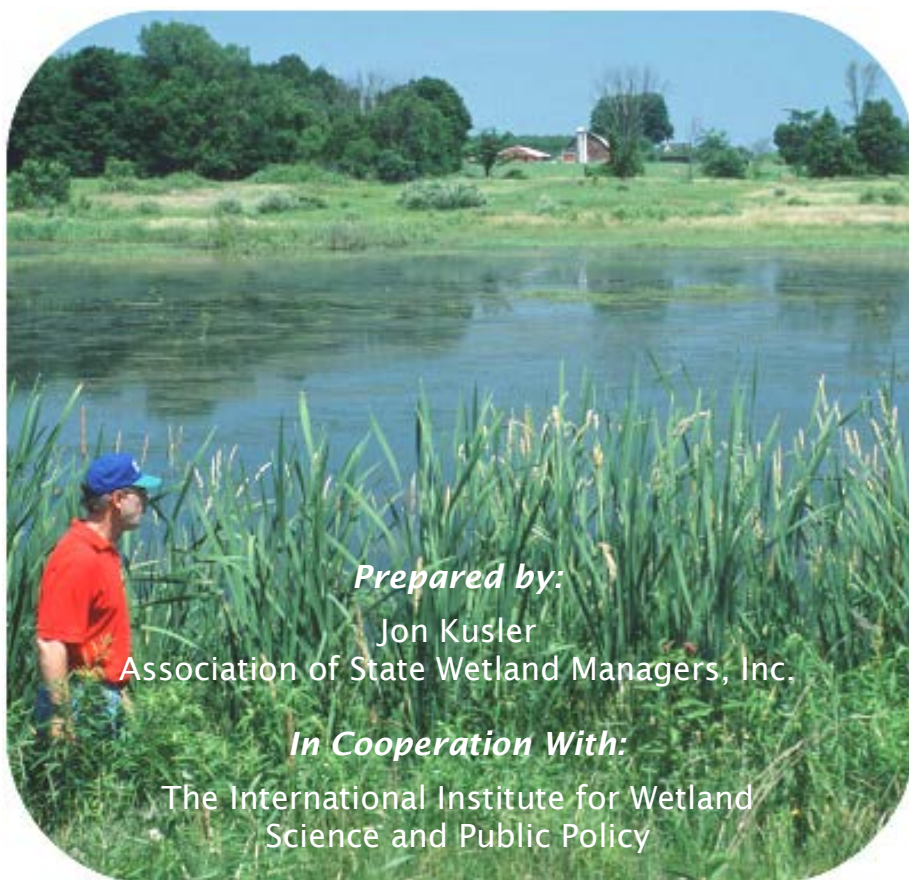


COMMON QUESTIONS:

**A GUIDE FOR LEGISLATORS:  
WETLAND PROTECTION  
AND  
RESTORATION**



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## PREFACE

This guide was prepared to help legislators and their staffs understand common issues in wetland protection and restoration and identify opportunities for strengthening wetland protection and restoration. It was prepared for the Association of State Wetland Managers (ASWM) by Jon Kusler with the assistance of Jeanne Christie and Sharon Weaver.

The guide reflects questions concerning wetlands posed to the Association over a period of years by legislative staff working on wetland bills. It is also based upon a variety of research projects, conferences, workshops, and seminars carried out by ASWM. Portions of the material in this guide have been extracted from other guides in this series.

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## COMMON QUESTIONS: WETLAND PROTECTION AND RESTORATION

### Why should legislators be concerned about wetlands?

A. Legislators should be concerned about wetlands for a number of reasons. First, wetlands are important at the national, state, and local levels to prevent and control pollution, to provide flood storage and conveyance, to provide stormwater management, to reduce erosion and sedimentation, to protect source water protection, to protect ducks, fish and other wildlife, to provide tourism, to produce natural crops and to store atmospheric carbon.

Second, many wetlands continue to be threatened by fills and drainage. Activities in wetlands not only destroy natural functions and values but pose costs and hazards to communities and society as a whole. Wetlands are often characterized by deep, waterlogged, organic soils which are unstable as building locations. These soils may also be subject to liquefaction and severe damage during earthquakes. Onsite waste disposal is also a problem because septic tanks and soil absorption systems quickly fail in wetland high ground water conditions. Development in wetlands adjacent to lakes, streams, coastal waters is typically subject to serious flooding and may increase flooding on other lands. Flooding to a depth of 10 feet or more by a 100-year flood in riverine wetlands along major rivers and estuarine and coastal wetlands along the coasts is common.

Third, protection of wetlands is a political and legislative issue with some individuals and groups wishing to protect and restore wetlands and others wishing to develop/destroy wetlands. Wetland bills and legislative initiatives are common at all levels of government.

### What measures could legislators at federal, state, and local levels take to help protect and restore wetlands?

A. Legislators at all levels could help protect and restore wetlands by:

- Providing financial support for existing wetland nonregulatory (e.g., landowner incentives) and regulatory programs (federal, state, local). Most programs are limited by lack of staff and funds. Funding support is needed for mapping, assessment, planning, conservation easements, wetland purchase, public and landowner education, restoration, and research efforts.
- Adopting and funding additional landowner technical assistance and incentive programs including Farm Bill, Partners for Wildlife, and many state and local acquisition, conservation easement, and tax incentive programs.
- Authorizing or adopting regulations to fill the gaps in existing regulations. This could involve, at the federal level, Congressional amendment of the Clean Water Act to fill the gap created by SWANCC and other gaps in the Section 404 program. This would similarly require, at the state and local levels, amending or adopting statutes and regulations to fill the gaps in existing regulations.



*Deep organic soils are common in wetlands*

See additional recommendations below.

### **What are major legislative issues with wetland protection and restoration?**

A. Over the last decade, a wide variety of wetlands bills and draft ordinances have been introduced by legislators at Congressional, state legislature, and local council levels. Many of these bills have attempted to strengthen wetland protection and restoration by authorizing and funding the preparation of wetland maps, wetland regulations, tax incentives, conservation easements and other financial incentives to landowners (e.g., Wetland Reserve), restoration, and other measures. Many others have attempted to streamline and facilitate existing wetland programs by providing funding, providing joint permitting procedures, and authorizing the creation of mitigation banks. Still others have attempted to repeal existing wetland laws, add exemptions, and restrict the use of regulations through “property rights” and other legislation. Although legislative proposals differ from state to state and from bill to bill, many contain somewhat similar provisions and address issues similar to those discussed below.

Major issues pertaining to the

- Adequacy of existing wetland protection
- The roles of states and local governments in filling the gaps created by SWANCC
- The desirability of a no net loss goal
- The definition of “wetland”
- The need for wetland maps
- The classification of wetlands
- Assessment of wetlands
- Wetland functions and development potential
- Roles wetland restoration, creation and enhancement may play
- Use of mitigation banks
- Need for federal, state, and local roles in regulation/protection
- State “assumption” and “programmatic permits” pursuant to the Section 404 Program
- Better protecting/restoring wetlands while better meeting landowner needs

### **Issue: Are wetlands adequately protected?**

A. Wetlands on public and private lands are partly protected by a patchwork of federal, state and local regulations but many wetlands are unprotected. About 74% of the wetlands in the lower 48 states occur on private lands. Federal, state, and local regulations provide partial protection for most coastal and estuarine wetlands and wetlands adjacent to rivers and major lakes. However, many wetlands not directly connected to other water bodies sometime referred to as “isolated” wetlands are unprotected at any level of government.

In January, 2001 the U.S. Supreme Court in the SWANCC decision held that federal Clean Water Act Section 404 regulations, the principal federal program applying to wetlands, did not apply to isolated waters and wetlands which had been regulated by the Corps of Engineers (Corps) under the “migratory bird” rule. The Corps had claimed regulatory jurisdiction over these wetlands based upon their use by migratory birds and the implications of migratory birds to interstate commerce. The Supreme Court held that it was not the intent of Congress to authorize federal Section 404 regulations

of wetlands and waters based upon migratory birds alone. Many of these isolated wetlands are also not regulated at local or state levels. This creates a serious gap in the protection of wetlands which ranges from 10% to as much as 90% of the wetlands in some states.

**Issue: Is it important to protect “isolated” wetlands?**

A. Yes. Few wetlands are totally isolated from other wetlands and waters and affect the quality and quantity of those waters. Even wetlands fed primarily by precipitation are connected to ground water and may act as groundwater recharge or discharge areas. Partially isolated and isolated wetlands store and purify flood waters. Isolated and partially isolated wetlands are important to migratory birds in areas like the Prairie Pothole region. They are important habitat for fish, waterfowl, amphibians, reptiles, and mammals. They are important to water quality. They are important to source water protection in some instances.



*There are millions of small partially isolated wetlands in the northern, glaciated states*

**Issue: Will states fill the gap created by the SWANCC decision?**

A. Over time, states could partially fill the gap created by SWANCC by strengthening pollution control and public water programs, adopting additional landowner incentives, and strengthening regulations. But, only a small portion of the states have filled the gap so far—Ohio, Wisconsin, and Indiana. Other states are considering legislation although the process is slow. State regulations are highly varied in geographical scope and coverage. Adoption of additional regulations has been hindered by fiscal and political considerations.

**Issue: Could local governments regulatory programs fill the gap created by SWANCC?**

A. They could help. Local government programs are becoming increasingly important in wetland protection and restoration but most programs are in states with state wetland protection legislation as well. Only a small number of local governments have adopted wetland protection regulations in other areas.

An estimated 4,000 to 6,000 local governments have adopted local wetland protection regulations. Many communities have adopted stand alone wetland protection ordinances. Others have mapped wetlands as conservancy or sensitive land zones as part of broader zoning efforts. These include particularly large number of communities in Massachusetts, Connecticut, Rhode Island, New Hampshire, Maine, Vermont, New York, Maryland, Pennsylvania, Virginia, Florida, Wisconsin, Minnesota, Michigan, Illinois, Washington State, Oregon, and California. Smaller numbers of communities in other states such as Colorado, Texas, Montana, Alaska, and Wyoming have adopted wetland regulations. Some additional local governments in other states have adopted floodplain zoning or broader zoning, subdivision control, and special ordinances which provide some measure of protection for wetlands.

Although adoption of wetland regulations is the most common local protection technique, many communities in recent years have supplemented regulations with incorporation of wetland maps into community master planning efforts, construction of wetland boardwalks and trails as part of open space and recreation programs, the implementation of bioengineering for stream banks, and construction of wetlands for treatment of domestic wastes and stormwater runoff. Land trusts have played important roles in many of these efforts.

Some local governments have not adopted regulations but, nonetheless, influence federal or state regulatory decisions. They have done this by requesting the Corps and state wetland regulatory agencies to submit landowner applications for federal or state wetland permits to local conservation commissions, the local zoning administrator, or other local officials for comment prior to issuance. Local governments then provide comments to the federal or state regulatory agency. In this way, local governments can influence federal or state permitting although there is no guarantee that the federal or state agencies will follow local recommendations.

**Issue: Are federal, state, and local non-regulatory programs important in protecting wetlands? Do they fill the gap created by SWANCC?**

A. State, local and federal non-regulatory programs such as public education, conservation easements, tax incentives, and landowner education are extremely important in protecting and restoring wetlands. Local comprehensive planning, watershed planning and master planning with wetlands as one component can guide development away from wetlands. Landowner education and tax incentive programs can play extremely important protection roles in influencing landowner decision-making. So can grant in aid and technical assistance programs to landowners such as the Wetland Reserve and Partners for Wildlife Program. Wetlands may also be protected through acquisition (e.g. open space bond issues) and public land planning and management.

Despite the importance of these programs, they only partially fill the gap created by SWANCC for several reasons.

First, many of these incentive programs such as the Wetland Reserve Program only apply to agricultural lands while loss of wetlands is occurring in many urban and urbanizing contexts. Second, voluntary programs do not prevent a public or private landowner from destroying wetlands if they have motivation to do so. Third, non-regulatory acquisition, easement and other programs are often subject to budgetary restraints.

On the other hand, nonregulatory efforts are essential and may be productively strengthened over time. Regulatory and nonregulatory approaches need to be combined to control activities which will damage or destroy wetlands while easing the burdens on private landowners.

**Issue: What should be the goals of state and local wetland protection programs? Should a no net loss goal be adopted?**

A. The most successful state and local wetland protection programs have often been adopted to serve a broad range of goals including but not limited to protection and restoration of wetland functions, values, and acreage. Many state and local wetland protection efforts in recent years have also adopted a no net loss/net gain goal



measured in terms of functions, values, and acreage. Acreage is used in addition to functions and values because it is so difficult to accurately measure functions. The adoption of a no net loss goal has proven useful in establishing an overall standard for federal agencies, states, and local governments.

**Issue: How can wetlands be defined? Do scientists agree on the definition of a “wetland?”**

A. Two wetland definitions have been widely used at the federal level—the U.S. Fish and Wildlife Service (FWS) definition used for the National Wetland Inventory (NWI) and the Corps definition used for regulatory permitting. Increasingly other agencies, states and local units are also using these definitions in their regulatory and management efforts.

Scientists agree that wetlands are transition areas between aquatic ecosystems and uplands. Scientists agree that wetlands are lands subject to periodic inundation or saturated soil conditions which give rise to plants and soils able to grow in inundated or saturated soils. Scientists also agree that wetlands are characterized by a variety of functions and values which result from such conditions such as high primary productivity (in many instances), fish habitat, amphibian and reptile habitat, bird habitat, flood storage and conveyance, erosion control, and pollution control.

Nevertheless, there is some scientific disagreement with regard to how “wet” (number of days of inundation or saturation per year) an area must be to qualify as a wetland, the precise mixtures of characteristic vegetation, the full range of wetland soil characteristics, and the depth of water. These disagreements have resulted in a variety of slightly different definitions of wetlands including the FWS and Corps definitions mentioned above.

Both the FWS and Corps definitions have been widely used over a period of years and are well accepted by the scientific community. The National Wetland Inventory (NWI) definition has been used to map wetlands throughout the U.S. and any attempt to change this definition for mapping would require remapping—a huge task that has taken almost thirty years. The Corps definition has also been widely used for almost thirty years and is well accepted. Any attempt to change this definition would potentially open up tens of thousands of permits to reevaluation.



*Various wetland definitions usually produce similar “on the ground” boundaries*

**Issue: Is there much difference in what is considered a wetland “on the ground” between the definitions?**

A. There is little difference in what is considered a “wetland” on the ground in the FWS’s and Corps’ definitions for *most* coastal, estuarine, river fringe, and lake fringe wetlands. There is also little difference what definition of wetland is used for many depressional, organic or mineral flats, or slope wetlands which are inundated or saturated much or all of the time.

More differences occur in defining the boundaries for infrequently flooded or saturated wetlands such as flats, plays, riparian zones, and some depressions. The deep water boundary of wetlands also differs somewhat, depending upon the definition used.

**Issue: Do courts favor one definition over another?**

A. No court has held that one definition is “better” than another.

**Issue: Are “riparian” zones” in the West wetlands?**

A. Many riparian and floodplain areas adjacent to rivers and streams in the West serve functions similar to those for wetter systems in the East. Riparian and floodplain areas in the West perform functions such as erosion control, flood storage, flood conveyance, pollution control, and bird, mammal, amphibian, fish and reptile habitat. Such areas are considered “waters of the U.S.” in some regulatory and planning programs. A range of efforts are underway to protect and restore such areas although most areas remain unprotected. Because the plants, soils and animals found in such areas do not reflect saturated conditions and because saturation of the ground is infrequent, most of these areas are not considered wetlands.

**Issue: Are wetland maps needed?**

A. Wetland maps which describe the types of wetlands and delineate (in an overall sense) wetland boundaries are essential for regulation, planning, acquisition, and other management. Landowners need wetland maps to help them determine whether they have wetlands on their properties and the boundaries of the wetlands. Most states with regulatory programs require mapping prior to regulation. Most local governments also adopt wetland maps as part of regulations. The federal Section 404 Program has never adopted maps but NWI maps are sometimes used to approximate boundaries for the 404 Program. The NWI maps have proven to be useful at federal and state levels for management purposes even if only used on a presumptive basis.

**Issue: Are wetland maps available for the nation as a whole?**



*National Wetland Inventory Map*

A. NWI maps at the scale of 1/24,000 are available for approximately ninety percent of the lower 48 states including most populated areas. These maps are not designed for use with the Section 404 regulatory program because they utilize a slightly different wetland definition than the Section 404 program. Many of these maps are also available in digital form.

A number of states have prepared their own wetland maps for wetland regulatory and management purposes such as New York, Massachusetts, and Wisconsin. Increasingly they have used NWI maps (or a state version of these maps). Some local governments have also prepared their own wetland maps.

**Issue: Are wetland maps sufficiently accurate and detailed to resolve boundary disputes?**

A. Usually no. Wetland maps are useful in suggesting whether a property is, overall, located in a wetland, the type of wetland, and overall wetland boundaries. However, maps are often insufficiently accurate and detailed to locate precise wetland boundaries on the ground (accuracy of 5-10 feet) or to resolve boundary disputes. Field surveys utilizing wetland definitions are needed to refine boundaries and resolve disputes. Surveys often involve detailed examination of vegetation, soil borings, and a search for hydrologic indicators (e.g. water marks on trees). In rare instances more detailed hydrologic studies (e.g., piezometers) may be used. Typically boundaries are “red flagged” on the ground once boundaries are more precisely identified.

**Issue: Are wetland boundaries delineated more easily in some instances than others?**

A. Yes, it is often quite easy to identify the landward boundaries of coastal and estuarine wetlands because daily inundation by the tides can be easily seen and salt tolerant plants species are relatively small in number and easily identified. The landward boundaries of many riverine and lake fringe wetlands and some depressional, “flats” and slope wetlands are also easily identified where there are sharp breaks in topography such as a bluff or rim.

Wetland boundaries are more difficult to identify where slopes are gradual and where inundation or saturation occurs only a portion of the year. Wetland boundaries are also often difficult to delineate for highly altered systems which have been partially drained or filled (particularly where there is subsurface drainage). Here a combination of vegetation, soils, and hydrologic indicators must be used.

**Issue: Should wetlands be classified or “grouped” for regulatory purposes?**

A. Various proposals have been made to classify wetlands in simple A, B, C categories for regulatory purposes to indicate development potential. However, highly simplistic classifications based upon a limited number of wetland characteristics pose both scientific and practical problems.

There is scientific agreement that all wetlands are not the same in terms of natural functions, values, natural hazards, and other features. A variety of scientific wetland classification schemes have been developed to help characterize wetlands. For example, the Cowardin Classification system is used as the basis for NWI mapping. However, dividing wetlands into simplistic A, B, C categories based upon functions to guide protection and destruction decisions results in a variety of problems:

- The suitability of wetlands for development and protection depends upon a wide range of features such as flooding and erosion hazards, not simply functions and values. Simplistic classification based upon functions and/or values alone is misleading.
- Wetlands change over time as watershed hydrology changes and any attempt to evaluate natural processes and characteristics once and for all cannot reflect these changes.

There are also practical limitations upon accurate classification of wetlands. Accurate assessment of functions and values for even a single wetland is expensive. Accurate assessment of tens or hundreds of thousands of wetlands in a governmental unit is prohibitively expensive. For example, the state of New York spent, as part of its wetland regulatory classification system, several million dollars classifying wetlands and now makes little use of the classification system because it was too generalized and took into account too few factors.

**Issue: Is there any simple assessment method or technique for assessment of wetland functions and values?**

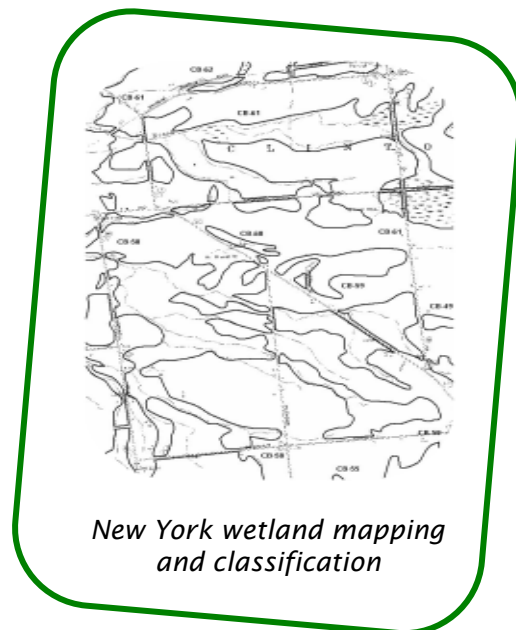
A. Scientists have developed more than forty rapid wetland assessment techniques to assess wetland functions and or values. However, all techniques have been subject to limitations in terms of accuracy. None have been broadly used for regulatory purposes although there has been considerable interest in the Hydrogeomorphic Assessment Method and various Indices of Biological Integrity.

Knowing the overall type of wetland, its condition and its context can help *suggest* that the wetland will serve particular functions and values. For example, riverine wetlands are most important for flood conveyance and flood storage. Estuarine, lake fringe and riverine wetlands are often most important for wave retardation and erosion control. Riverine, lakeshore and coastal/estuarine wetlands are most important for fisheries.

But there is no easy way to tell with accuracy whether a specific wetland will serve particular functions or values. Detailed evaluation of wetland functions and values is time consuming, expensive, and requires considerable expertise. Documentation of functions is often difficult because long term wetland features are not often revealed on a single air photo or in a single site visit due to changing water levels and vegetation patterns over the seasons.

**Are wetlands difficult to assess?**

A. Often, yes. All wetland characteristics including soils, vegetation, depth of water, fauna, biodiversity and other characteristics depend, ultimately, upon wetland hydrology. However, wetland hydrology is typically complex. It is not easy to determine wetland hydrology based upon a single field visit or an air photo or satellite image because all wetlands are subject to seasonal and longer term fluctuations in hydrology (e.g. seasonal water level fluctuations). Many freshwater wetlands are wetland only a portion of the time. Terrestrial as well as aquatic vegetation therefore live in wetland systems a portion of the time. This makes it difficult to identify wetland boundaries, to determine the impact of activities on wetlands, and to determine the adequacy of impact reduction and compensation measures.



Wetlands are also sensitive to small changes in precipitation and runoff. These fluctuations, while natural, result in shifting patterns of vegetation and animal use as well as other features during a year and over a period of years. For example, many Prairie Pothole wetlands are dry a portion of the year and may be dry for many years during a drought period. Yet they play important long term functions such as flood storage and waterfowl breeding

### **Should a wetland with limited “functions” be available for development?**

A. It has been suggested that a wetland with limited “functions” should be available for development. But, wetlands with limited functions are often subject to a variety of severe development limitations apart from functions and values such as flooding, storm waves, erosion and unstable soils. In addition, a wetland which may serve only a single function may be important in its setting. Consider, for example a wetland with limited habitat functions in a source water area which might serve only a single, important function—protection of a source water reservoir from pollutants and sediment. But, this single function is extremely important. In addition, a low value wetland may have very high restoration potential and this is also relevant to its suitability for development and protection.

### **Should wetland restoration, creation, or enhancement be allowed to compensate for wetland losses?**

A. Restoration, creation, and enhancement of wetlands can help restore lost pollution control, flood storage, flood conveyance, erosion control and other functions and values on a watershed or regional basis. Thousands of wetlands have been restored in the last decade pursuant to the Farm Bill and other programs. However, restoration, creation and enhancement efforts do not work for all types of wetlands (e.g., bogs). Many restoration projects fail. And, more importantly, restoration at one location will not compensate for loss at another location. Location is extremely important. For example, restoration of a wetland in a rural area will not compensate for destruction of an urban wetland which helps protect a water supply reservoir from sources of pollution.

### **Is it possible to restore a wetland?**

A. Natural, undisturbed wetlands are often characterized by deep organic soils developed over thousands of years and subtle relationships of hydrology, soils, vegetation, animal life, and nutrients. Total restoration of a wetland in a manner that totally “duplicates” naturally occurring wetland soils is therefore impossible. Soils are important to some pollution control, habitat, and carbon storage functions. However, many wetlands characteristics including certain functions and values such as flood storage and conveyance, erosion control, pollution control, fisheries, and some habitat functions/values can be restored.

### **Is it possible to create a wetland?**

A. It is often possible to create an area which looks and functions like a natural wetland. However, it is not possible to quickly create mature wetland soils and the biota which inhabit such soils as noted above. Created wetlands are also more unstable in the landscape than natural wetlands and quickly fill with sediment. Attempts to create wetlands also quite often fail because it is difficult to “get the hydrology” right. The exception is where an upland area adjacent to an existing wetland or water body is

excavated, using the existing wetland or nearby wetlands as a guide for bottom topography and vegetation. This helps “get the hydrology” right, insures a source of water, and provides seed stock.

### **Is it possible to “enhance” wetland functions and values?**

A. The FWS has used dikes, dams, and other water control techniques to manipulate water levels for many years for the purpose of enhancing waterfowl habitat. Other types of management such as deepening portions of a wetland, control of exotic plant species, animal control (e.g., muskrats), and planting of particular species can, in some instances, be used to increase specific wetland functions. While it is often possible to enhance a particular function or suit of functions, this may come at the expense of other functions. For example, cutting trees and other dense vegetation in a wetland adjacent to a river may enhance wetland flood conveyance capacity, but it may reduce pollution control, habitat, scenic and other functions and values.

### **Is it more difficult to create than to restore a wetland?**

A. Usually, yes. For example, wetland restoration may be accomplished relatively easily where a wetland has been partially drained and overall topography and soils are intact. In contrast, uncertainties concerning hydrology are often encountered with attempts to create a wetland from uplands. Considerable grading and filling is often necessary.

### **Is it more difficult to restore some types of wetlands in comparison with others?**

A. A relatively high degree of success has been achieved in restoring coastal, estuarine, and freshwater marshes adjacent to lakes and streams due to the presence of adjacent water bodies which provide a source of water. Adjacent wetlands can also often be used as a guide for restoration or creation efforts. Less success has been achieved for marshes with elevation-sensitive plant species such as *Spartina patens* and for shrub wetlands. Even less success has been achieved with sea grasses and forested wetlands.

### **Is it more difficult to restore some wetland functions than others?**

A. It is often relatively easy to restore flood conveyance and flood storage which depends primarily upon topographic contours and, to a lesser extent, upon vegetation. Erosion control functions may also be quite easily restored through bioengineering and replanting of native plants. Similarly certain pollution prevention and control functions may be restored through natural revegetation and replanting. Water recreation and aesthetic functions may be restored by reestablishing original hydrology regime, recontouring and replanting. Forestry and other natural crop functions may be restored by natural revegetation and planting.

Certain habitat functions may also be restored with modest effort such as waterfowl production. There is a large amount of experience and scientific knowledge available for waterfowl production and relative ease in creating a combination of open water and vegetated marshes. However, other habitat functions which depend upon very precise hydrologic regimes and water quality such as many endangered plant and animal species may be very difficult to restore. Such restoration is particularly difficult if invasive species are present.



Certain heritage or archaeological functions such as a shell hidden in a marsh may be impossible to restore.

### **Will restoration, creation, or enhancement at one site compensate for loss of functions and values at another distant site?**

**A.** Restoration, creation, or enhancement at a distance site can create or restore wetland functions and values such as water quality protection, erosion control, and flood storage at that site. But, this does not mean that the original functions in the ecosystem or landscape are replicated or that the same segment of the public will continue to benefit from these functions. Many wetland functions and values in a landscape context depend upon not only the size, shape, type, and other characteristics of a wetland but upon proximity and connections with other waters, water quality, adjacent upland buffers, threats, and a broad range of other factors. Location makes a great deal of difference to ecosystem functions.

Location also makes a difference to wetland people. At a minimum, different individuals will enjoy the benefits of functions at different wetland locations. For example, it may be possible to create or restore a marsh on one lake to compensate for the destruction of a lakeshore marsh on another lake. But, there may be a significant decline in the Northern Pike population on the second lake where the wetland is destroyed affecting riparian homeowners and public using this lake. Similarly, restoration or creation of a wetland at one site may provide flood storage or conveyance or erosion control. But landowners at another site damaged by flood or erosion will receive little comfort from the compensation at the other site and may, in fact, sue other landowners for or governmental units permitting such damage.

### **Why do regulators often favor onsite and in-kind restoration for certain types of impacts?**

**A.** Efforts to restore a damaged wetland at the same site often benefit from the original hydrology and from nearby seed stocks which may make replanting unnecessary. Restoring or creating the same type of wetland at the same site can often best not only restore wetland functions but insure that the benefits of the functions continue to be enjoyed by the same individuals and groups. However, onsite and in-kind restoration are not always possible. In addition, it may be in the public interest to shift the types as well as the location of benefits in some instances.



*Forested wetlands may take long to restore*

### **How long will it take for a restored or recreated system to approximate the original system?**

**A.** The answer depends upon the type of wetland, the wetland functions, and the intended plants and animals. It may be possible to restore or recreate a marsh with a lush stand of marsh vegetation in three or four years. Restoration of a red maple swamp may take thirty years or more. Although these recreated or restored systems may visually resemble the originals, soils may be quite different.

Restoration or creation of particular functions and values also varies. Flood storage and flood conveyance capability may be quickly recreated since these functions depend upon basin topography. Waterfowl habitat capability which depends upon open water and marsh vegetation may also be restored quite quickly. But, amphibian habitat which depends upon wetland soils may take much longer.

### **Can mitigation banks be used to compensate for lost wetland functions and values?**

A. Mitigation banks are wetland restoration, creation, or enhancement projects constructed to provide “credits” for future destruction or damage to wetland ecosystems. A landowner or developer proposing to destroy or damage a wetland ecosystem pays for such credits. Most mitigation banks are located in rural areas, some distance from sites of development and wetland damage. Most banks are designed to compensate for losses of habitat.

Buying mitigation credits in a mitigation bank tens of miles from an impacted site may help compensate for losses regionally but will be of little solace to landowners adjacent to a project site subject to increased flooding, erosion, or other losses.



*Flood storage is restorable*

Many regulatory agencies are allowing the use of mitigation banks to help compensate for certain types of habitat losses. However, regulatory agencies usually require onsite impact reduction and restoration measures as well for impacts which are unique to the setting such as potential increased flooding, erosion, and pollution, erosion on other properties and destruction of fish and other habitat for a particular water body.

### **Is federal regulation of wetlands needed?**

A. Wetlands are important nationally and internationally important because they cross state and international boundaries, provide habitat for migratory birds and fish, are carbon sinks, and affect flooding both nationally and internationally. Many are located in National Parks, monuments, and recreation areas. For these reasons, some measure of federal regulation and/or oversight is needed to protect these “national” and “international” interests.

Federal regulation of wetlands is often characterized by more expertise than state and local regulatory programs. Wetlands are characterized by a number of special features which make them difficult to regulate for an agency with limited expertise.

This does not mean, however, that states and local governments should not play major roles in protecting and restoring wetlands.



## Are state and local regulations needed?

A. Yes. State and local regulations can integrate wetland protection and restoration into local land and water use decision-making. State and local regulations can, in some instances, provide a greater degree of protection than is possible through federal regulations. State and local regulations can fill the gaps in federal regulations including the gaps created by the SWANCC decision (see discussion above). State and local regulations can back up federal regulations and aid with monitoring and enforcement.

## Why have not more states “assumed” the section 404 program?

A. Only New Jersey and Michigan have “assumed” the Section 404 program. Pursuant to assumption, the state rather than the Corps issues wetland regulatory permits under their own statutes for most activities in freshwater wetlands for waters which are not navigable by the federal standards of navigability. The Corps continues to issue permits for activities in coastal and many riverine and lakeshore wetlands which are adjacent to waters which are navigable in fact.

The state assumption program is administered by the U.S. Environmental Protection Agency (EPA). EPA provides overall program oversight on state programs to insure compliance with federal standards. Much of the day-to-day state/federal coordination occurs with the Corps which continues to issue permits for wetlands adjacent to navigable waters.

Many states have investigated “assumption” but have decided not to apply for assumption for a number of reasons. First, many states have not adopted sufficiently comprehensive wetland regulations which would qualify them for state assumption. State regulations must equal or exceed federal regulations. Second, states have not wished to spend the additional funds for administration and enforcement of state wetland regulations. Third, states have found that State Programmatic Permits, issued

by the Corps, offer a more flexible approach for sharing permitting responsibilities with the federal government than the state assumption program. Many have applied for programmatic permits. See discussion below. Fourth, a state achieves limited control over activities in wetlands with state assumption because the Corps continues to regulate activities in traditionally navigable waters.

More states would likely assume the Section 404 program if Congress were to authorize partial assumption and assumption of permitting powers for traditionally navigable waters and adjacent wetlands.



*Michigan has “assumed” the Section 404 program*

## **Are state programmatic (“general”) permits an alternative to assumption?**

A. The Clean Water Act authorizes the Corps to issue “general” permits on a state, regional, or nationwide basis for categories of activities which Corps has determined will cause only minimal adverse environmental effects when performed separately and will have only minimal cumulative adverse effects on the environment. The Corps has interpreted this authority to allow the Corps to authorize programmatic general permits to states. Pursuant to such permits, states are authorized to issue permits for a broad range of activities in wetlands in lieu of direct permitting by the Corps pursuant to Section 404 where state regulations equal or exceed federal regulations. Many states which would not qualify for state assumption (see above) have sought general permits. General permits allow states to regulate certain traditionally navigable waters and do not require states to establish programs totally comparable to the federal Section 404 program.

A state “general permit” issued by the Corps to a state typically divides permitting responsibilities between the state and the Corps. Typically, the Corps continues to regulate some activities in navigable water and activities with major impacts. The state directly regulates activities with minor impacts. The Corps and the State jointly review some activities with moderate impact.

Wisconsin, Minnesota, Maine, New Hampshire, Rhode Island, Connecticut, Maryland, Florida, Pennsylvania, Oregon, and other states have been granted state programmatic permits by the Corps whereby the state regulates in place of the Corps at least a portion of the wetlands which are subject to Section 404 regulation.

## **How can landowners both better protect/restore wetlands and better meet landowner needs?**

A. Progress has been made in the last decade in making wetland regulations more landowner-friendly. Examples of measures which have been incorporated into many wetland protection programs include the following. They could be incorporated administratively or legislatively in other programs as well:

- Establishment and funding of federal, state, and local fee and easement acquisition programs.
- Establishment of income, estate, and real estate incentive programs at all levels of government
- Establish of public/landowner education programs.
- Advance planning of wetlands to identify highest value wetlands, wetlands with the most severe development threats.
- Acquisition and adoption of updated wetland maps.
- Establishment of joint federal, state, local permit processing procedures in regulations.
- Establishment of “pre-application” procedures.
- Adoption of state and local definitions of “wetlands” which coincide with the federal definition.
- Adoption of updated wetland maps.
- Adoption of consistent wetland delineation criteria (e.g., use of the Corps’s 1987 delineation manual state and local levels).
- Development and adoption of improved, consistent assessment procedures.
- Development and adoption of improved criteria and monitoring for restoration, creation, and enhancement.
- Improved training for regulators, consultants, landowners.

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U.S. House of Representatives Internet Law Library.

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Model Ordinances to Protect Local Resources, U.S. Environmental Protection Agency

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<http://www.cicacenter.org/swift.html>  
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[www.eli.org](http://www.eli.org)  
Environmental Law Institute.

<http://www.hg.org/torts.html>  
HierosGamos, Comprehensive law and government portal.

<http://www.statelocalgov.net/index.cfm>  
State and Local Government on the Net. Many, many free sites listed state-by-state.

<http://www.findlaw.com/>  
FindLaw. Many legal fields covered, free site.

<http://stu.findlaw.com/journals/general.html>  
FindLaw for Students. List of law review (hot buttons) with many accessible for free online.

<http://www.epa.gov/epahome/cfr40.htm>

U.S. Environmental Protection Agency. Laws & Regulations. CFR Title 40: Protection of Environment. Lists a range of federal agency web sites dealing with the environment (primarily CFR 40).

<http://www.epa.gov/docs/epacfr40/find-aid.info/state/>

U.S. Environmental Protection Agency. Laws & Regulations. Federal and State Government Regulations and Program References. Links to state environmental laws. State/federal programs described state-by-state. Good list of links.

<http://www.epa.gov/owow/wetlands/laws/>

U.S. Environmental Protection Agency. Wetlands. Laws. Summary of federal laws pertaining to wetlands (contains many links to the actual texts of laws).

[http://www.law.cornell.edu/topics/state\\_statutes.html](http://www.law.cornell.edu/topics/state_statutes.html)

Legal Information Institute. State Statutes on the Internet. Links to state laws by topic.

<http://www4.law.cornell.edu/uscode/33/ch26.html>

Clean Water Act (Full Text).

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U.S. Environmental Protection Agency wetlands site. Much descriptive information and many links.

<http://www.law.cornell.edu/opinions.html>

Legal Information Institute. State Courts – by Jurisdiction. Links to individual states and courts and full text of decisions.

<http://www.usace.army.mil/inet/functions/cw/cecwo/reg/sadmin3.htm>

U.S. Army Corps of Engineers. Statutory, Administrative and Judicial Materials. Wetland regulations with many links to full text of regulations.



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