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Wetlands: An Overview of Issues

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Wetlands: An Overview of Issues

Summary

The 110th Congress, like earlier ones, has been considering numerous policy topics that involve wetlands. A few of the topics are new to this Congress, such as wetlands provisions in the 2008 farm bill (P.L. 110-246), while most were examined but not resolved in early Congresses, such as applying federal regulations on private lands, wetland loss rates, restoration and creation accomplishments, and implications of court decisions affecting the jurisdictional boundaries of the federal wetland permit program. The Bush Administration continues to express its interest in wetland protection, pursuing a goal of restoring 3 million wetland acres.

The 110th Congress has also been considering wetland topics at the program level, responding to legal decisions and administrative actions. Perhaps the issue receiving the greatest attention is determining which wetlands should be included and excluded from permit requirements under the federal regulatory program in the Clean Water Act, as a result of Supreme Court rulings in 2001 (in the *SWANCC* case) that narrowed federal regulatory jurisdiction over certain isolated wetlands, and in June 2006 (in the *Rapanos-Carabell* decision) that left the jurisdictional reach of the permit program to be determined on a case-by-case basis. In the 110th Congress, House and Senate committees have held hearings on legislation intended to reverse the Court's rulings (H.R. 2421, S. 1870). Other topics of possible interest include implementation of Corps of Engineers changes to the nationwide permit program; redefining key wetlands permit regulatory terms in revised rules issued in 2002; and appropriations for the many federal wetland programs.

Wetland protection efforts continue to engender intense controversy over issues of science and policy. Controversial topics include the rate and pattern of loss, whether all wetlands should be protected in a single fashion, the effectiveness of the current suite of laws in protecting them, and the fact that 75% of remaining U.S. wetlands are located on private lands.

One reason for these controversies is that wetlands occur in a wide variety of physical forms, and the numerous values they provide, such as wildlife habitat, also vary widely. In addition, the total wetland acreage in the lower 48 states is estimated to have declined from more than 220 million acres three centuries ago to 107.7 million acres in 2004. The national policy goal of no net loss, endorsed by all administrations for the past two decades, has been reached, according to the Fish and Wildlife Service, as the rate of loss has been more than offset by net gains through expanded restoration efforts authorized in multiple laws. Many protection advocates say that net gains do not necessarily account for the changes in quality of the remaining wetlands, and many also view federal protection efforts as inadequate or uncoordinated. Others, who advocate the rights of property owners and development interests, characterize them as too intrusive. Numerous state and local wetland programs add to the complexity of the protection effort.

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Recent Developments

Wetland legislative activity in the 110th Congress has centered broadly on two issues. One is on wetlands provisions in the 2008 farm bill, which was enacted on June 18 (Food, Conservation, and Energy Act of 2008, P.L. 110-246). The new law reauthorizes and increases the acreage enrollment cap in the wetlands reserve program, with a goal of enrolling 250,000 acres annually, and extends provisions to enroll up to a million acres of wetlands and buffers in the Conservation Reserve Program. Other agricultural conservation programs, while lacking explicit wetlands protection provisions, are still likely to be beneficial to wetlands.

The second major area of legislative interest in the 110th Congress centers on proposals to reverse Supreme Court rulings that addressed the scope of geographic jurisdiction of wetlands regulations under the Clean Water Act. This interest arises because federal courts have played a key role in interpreting and clarifying the limits of federal jurisdiction to regulate activities that affect wetlands, especially since a 2001 Supreme Court ruling in the so-called *SWANCC* decision. In June 2006, the Supreme Court issued a ruling in two cases brought by landowners (*Rapanos v. United States*; *Carabell v. U.S. Army Corps of Engineers*) seeking to narrow the scope of the Clean Water Act (CWA) permit program as it applies to development of wetlands. In a 5-4 decision, a plurality of the Court (there was no majority opinion) held that the lower court had applied an incorrect standard to determine whether the wetlands at issue are covered by the CWA. Justice Kennedy joined this plurality to vacate the lower court decisions and remand the cases for further consideration, but he took different positions on most of the substantive issues raised by the cases, as did four dissenting justices, leading to uncertainty about interpretation and implications of the ruling. On June 5, 2007 — nearly a year later — the Corps and the Environmental Protection Agency issued guidance to their field staffs on making jurisdictional determinations in light of the 2006 decision. Legislation intended to reverse the *SWANCC* and *Rapanos* rulings has been introduced (H.R. 2421, S. 1870 — the Clean Water Authority Restoration Act), and House and Senate committees have held hearings.

Two reports document recent changes in wetland acres. The U.S. Fish and Wildlife Service released its most recent periodic survey of changes in wetland acreage nationwide in March 2006. Covering 1998 to 2004, it concluded that during this time period there was a small net gain in overall wetland acres for the first time that this survey has been conducted. Others caution, however, that much of this gain was in ponds, rather than natural wetlands. The Council on Environmental Quality released a report in April 2007, stating that the Bush Administration had almost attained its goal, announced in 2004, to create, improve and protect 3 million wetland acres in five years; and documenting that almost 2.8 million acres of wetlands had

been restored, protected, or improved through wetland conservation programs in the preceding three years.

Introduction

Prior to the mid-1980s, federal laws and policies to protect wetlands were generally limited to providing habitat for migratory waterfowl, especially ducks and geese. Some laws encouraged destruction of wetland areas, including selected provisions in the federal tax code, public works legislation, and farm programs.

Since the mid-1980s, the values of wetlands have been recognized in different ways in numerous national policies, and federal laws either encourage wetland protection, or prohibit or do not support their destruction. These laws, however, do not add up to a fully consistent or comprehensive national approach. The central federal regulatory program, Section 404 of the Clean Water Act, requires permits for the discharge of dredged or fill materials into many but not all wetland areas. However, other activities that may adversely affect wetlands do not require permits, and some places that scientists define as wetlands are exempt from this permit program because of physical characteristics. One agricultural program, Swampbuster, is a disincentive program that indirectly protects wetlands by making farmers who drain wetlands ineligible for federal farm program benefits; those who do not receive these benefits (60% of all farmers received no federal farm payments of any kind in 2003) have no reason to observe the requirements of this program. Numerous other acquisition, protection, and restoration programs complete the current federal effort.

Although numerous wetland protection bills have been introduced in recent Congresses, the most significant new wetlands legislation to be enacted has been in the two most recent farm bills, in 1996 and 2002. During this period, Congress also reauthorized several wetlands programs, mostly setting higher appropriations ceilings, without making significant shifts in policy. President Bush and members of his Administration have repeatedly endorsed wetland protection in legislation, such as the 2002 farm bill and the North American Wetlands Conservation Act reauthorization, and at events, such as Earth Day presentations. The Bush Administration has issued guidance on mitigation policies and regulatory program jurisdiction; the latter has been controversial (see discussion below).

In 2002, the Bush Administration endorsed the concept of "no-net-loss" of wetlands — a goal declared by President George H. W. Bush in 1988 and also embraced by President Clinton to balance wetlands losses and gains in the short term and achieve net gains in the long term. On Earth Day 2004, President Bush announced a new national goal, moving beyond no-net-loss, of achieving an overall increase of wetlands.[1] The goal is to create, improve, and protect at least three million wetland acres over the next five years in order to increase overall wetland acres and quality. (By comparison, the Clinton Administration in 1998 announced policies intended to achieve overall wetland increases of 200,000 acres per year by

[1] See [http://www.whitehouse.gov/news/releases/2004/04/20040422-1.html].

2005.) To meet the new goal, President Bush urged Congress to support the Administration's budget request to fully fund the Wetlands Reserve Program (WRP) for agricultural land and increase funding for the North American Wetlands Conservation Act Grants Program (NAWCP). The President's strategy also called for better tracking of wetland programs and enhanced local and private sector collaboration.

In April 2008, the Administration issued a report saying that more than 3.6 million acres of wetlands had been restored, protected, or improved as part of the President's program since April 2004, and that the number will climb to 4.5 million acres by the original date set by that program — Earth Day 2009.[2] The report documents gains, but not offsetting loses. It summarizes accomplishments for each federal wetland conservation program. Environmental groups criticized the report as presenting an incomplete picture, because it fails to mention wetlands lost to agriculture and development.

Congress has provided a forum in numerous hearings where conflicting interests in wetland issues have been debated. These debates encompass disparate scientific and programmatic questions, and conflicting views of the role of government where private property is involved. Broadly speaking, the conflicts are between:

- Environmental interests and wetland protection advocates who have been pressing for greater wetlands protection as multiple values have been more widely recognized, by improving coordination and consistency among agencies and levels of governments, and strengthened programs; and

- Others, including landowners, farmers, and small businessmen, who counter that protection efforts have gone too far, by aggressively protecting privately owned wet areas that provide few wetland values. They have been especially critical of the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA), asserting that they administer the Section 404 program in an overzealous and inflexible manner.

Wetlands: Information and Science

Wetlands, with a variety of physical characteristics, are found throughout the country. They are known in different regions as swamps, marshes, fens, potholes, playa lakes, or bogs. Although these places can differ greatly, they all have distinctive plant and animal assemblages because of the wetness of the soil. Some wetland areas may be continuously inundated by water, while other areas may not be flooded at all. In coastal areas, flooding may occur daily as tides rise and fall.

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[2] Office of the President, Council on Environmental Quality, *Conserving America's Wetlands 2008: Four Years of Progress Implementing the President's Goal*, April 2008.

Functional values, both ecological and economic, at each wetland depend on its location, size, and relationship to adjacent land and water areas. Many of these values have been recognized only recently. Historically, many federal programs encouraged wetlands to be drained or altered because they were seen as having little value as wetlands (for example, flood protection programs of the Corps and Department of Agriculture have modified or eliminated many flood plain wetlands through alterations of the hydraulic/hydrologic regime). Wetland values can include:

- habitat for aquatic birds and other animals and plants, including numerous threatened and endangered species; production of fish and shellfish;
- water storage, including mitigating the effects of floods and droughts;
- water purification;
- recreation;
- timber production;
- food production;
- education and research; and
- open space and aesthetic values.

Usually wetlands provide some combination of these values; single wetlands rarely provide all of these values. The composite value typically declines when wetlands are altered. In addition, the effects of alteration often extend well beyond the immediate area, because wetlands are usually part of a larger water system. For example, conversion of wetlands to urban uses has increased flood damages; this value has received considerable attention as the costs of natural disaster costs mounted through the 1990s.

Scientific questions, with answers that can be important to policy makers, include defining wetlands; cataloguing the rate and pattern of wetland declines and losses as well as restorations and increases; and assessing the importance of wetland changes to broader ecosystems. Wetlands science has made considerable strides in developing a fuller and more sophisticated knowledge about many aspects of wetlands in the more than two decades since protecting wetlands became a general policy goal in federal law and program administration.[3]

Two topics where scientific information and wetland protection policies remain inconsistent continue to be: should all regulated wetlands be treated equally; and if all scientifically-defined wetlands are not covered by the federal regulatory program, what subset should be covered, and how should such decisions be made? While discussion of either question has major science elements, both are primarily addressed in the section below about the Clean Water Act Section 404 program.

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[3] Two places to view some of the changes in scientific knowledge and understanding are through the products of the Society of State Wetlands Managers [http://www.aswm.org] and the Society of Wetland Scientists [http://www.sws.org].

What Is a Wetland?

Scientists generally agree that the presence of a wetland can be determined by a combination of soils, plants, and hydrology. The only definition of wetlands in law, in the swampbuster provisions of farm legislation (P.L. 99-198) and reproduced in the Emergency Wetlands Resources Act of 1986 (P.L. 99-645), lists those three components. This definition does not include more specific criteria, such as exactly what conditions must be present and for how long, thus leaving interpretation to scientists and regulators on a case-by-case basis. Controversies are exacerbated when many sites that have those three components and are identified as wetlands by experts, either may have wetland characteristics only some portion of the time, or may not look like what many people visualize as wetlands. Also, many of these sites have been directly or indirectly modified by human activities that diminish their appearance (and their ability to perform wetland functions).

Wetlands currently subject to federal regulation are a large subset of all places that members of the scientific community would call a wetland. These regulated wetlands, under the Section 404 program discussed below, are currently identified using technical criteria in a wetland delineation manual issued by the Corps in 1987. This manual was prepared jointly and is used by all federal agencies to carry out their responsibilities under this program (the Corps, EPA, Fish and Wildlife Service (FWS), and the National Marine Fisheries Service (NMFS)). It provides guidance and field-level consistency for the agencies that have roles in wetland regulatory protection. (A second and slightly different manual, agreed to by the Corps and the Natural Resources Conservation Service (NRCS), is used for delineating wetlands on agricultural lands.) While the agencies try to improve the objectivity and consistency of wetland identification and delineation, judgement continues to play a role and can lead to site-specific controversies. Cases discussed below (see "Section 404 Judicial Proceedings: *SWANCC* and *Rapanos*") center on whether wetlands should be included or exempted from the regulatory program in certain circumstances, such as the physical setting.

How Fast Are Wetlands Disappearing, and How Many Acres Are Left?

The U.S. Fish and Wildlife Service periodically surveys national net trends in wetland acreage using the National Wetlands Inventory (NWI). It has estimated that when European settlers first arrived, wetland acreage in the area that would become the 48 states was more than 220 million acres, or about 5% of the total land area. By 2004, total wetland acreage was estimated to be 107.7 million acres, according to data it presented in its most recent survey.[4] Data compiled by the (NRCS and the FWS in separate surveys and using different methodologies have identified similar trends. Both show that the annual net loss rate dropped from almost 500,000 acres annually nearly three decades ago to slight net annual gains in recent years. The

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[4] U.S. Fish and Wildlife Service, National Wetlands Inventory, *Status and Trends of Wetlands in the Coterminus United States, 1998 - 2004*, March 2006, 110 pp. This is the most recent of several status and trend reports by the Inventory over the past 25 years, which document wetlands trends at both a national and regional scale.

FWS survey estimated that the average annual gain between 1998 and 2004 was 32,000 acres, primarily associated with the expansion of shallow ponds, while NRCS (using its Natural Resources Inventory (NRI) of privately-owned lands) estimated that there was an average annual gain of 26,000 acres between 1997 and 2002. [5] NRCS cautioned against making precise claims of net increases because of statistical uncertainties. Some environmentalists caution that the increases identified in the latest FWS data are tied to a proliferation of small ponds rather than natural wetlands.

Numerous shifts in federal policies since 1985 (and changes in economic conditions as well) strongly influence wetland loss patterns, but the composite effects remain unmeasured beyond these raw numbers. There usually is a large time lag from the announcement and implementation of changes in policy to collection and release of data that measure how these changes affect loss rates. Also, it is often very difficult to distinguish the role that policy changes play from other factors, such as agricultural markets, development pressures, and land markets.

Further, these data only measure acres. This may have been appropriate two decades ago when scientists knew less about how to measure the specific functions and values found in wetlands. By providing data limited to number of acres, these data provide few insights into changes in their quality, as measured by the values they provide, which is often determined by factors such as where a wetland is located in a watershed, and what are the surrounding land uses. Nevertheless, in his Earth Day 2004 wetlands announcement (discussed above), President Bush said that as the nation is nearing the goal of no-net-loss, it is appropriate to move towards policies that will result in a net increase of wetland acres and quality.

Selected Federal Wetlands Programs

Federal program issues include the administration of programs to protect, restore, or mitigate wetland resources (especially the Clean Water Act Section 404 program); relationships between agricultural and regulatory programs; whether all wetlands should be treated the same in federal programs, and which wetlands should be subject to regulation; federal funding of wetland programs; and whether protecting wetlands by acres is an effective proxy for protecting wetlands based on the functions they perform and the values they provide. In addition, private property questions are raised, because almost three-quarters of the remaining wetlands are located on private lands. Some property owners believe that they should be compensated when federal programs limit how they can use their land, and for decisions that arguably diminish the value of the land.

The Clean Water Act Section 404 Program

The principal federal program that provides regulatory protection for wetlands is found in Section 404 of the Clean Water Act (CWA). Its intent is to protect water and adjacent wetland areas from adverse environmental effects due to discharges of

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[5] Natural Resources Conservation Service, *National Resources Inventory; 2002 Annual NRI (Wetlands).* See [http://www.nrcs.usda.gov/technical/NRI/2003/nri03wetlands.html].

dredged or fill material. Enacted in 1972, Section 404 requires landowners or developers to obtain permits from the Corps of Engineers to carry out activities involving disposal of dredged or fill materials into waters of the United States, including wetlands.

The Corps has long had regulatory jurisdiction over dredging and filling, starting with the River and Harbor Act of 1899. The Corps and EPA share responsibility for administering the Section 404 program. Other federal agencies, including NRCS, FWS, and NMFS, also have roles in this process. In the 1970s, legal decisions in key cases led the Corps to revise this program to incorporate broad jurisdictional definitions in terms of both regulated waters and adjacent wetlands. Section 404 was last amended in 1977.

This judicial/regulatory/administrative evolution of the Section 404 program has generally pleased those who view it as a critical tool in wetland protection, but dismayed others who would prefer more limited Corps jurisdiction or who see the expanded regulatory program as intruding on private land-use decisions and treating wetlands of widely varying value similarly. Underlying this debate is the more general question of whether Section 404 is the best approach to federal wetland protection.

Some wetland protection advocates have proposed that it be replaced or greatly altered. First, they point out that it governs only the discharge of dredged or fill material, while not regulating other acts that drain, flood, or otherwise reduce functional values. Second, because of exemptions provided in 1977 amendments to Section 404, major categories of activities are not required to obtain permits. These include normal, ongoing farming, ranching, and silvicultural (forestry) activities. Further, permits generally are not required for activities which drain wetlands (only for those that fill wetlands), which excludes a large number of actions with potential to alter wetlands. Third, in the view of protection advocates, the multiple values that wetlands can provide (e.g., fish and wildlife habitat, flood control) are not effectively recognized through a statutory approach based principally on water quality, despite the broad objectives of the Clean Water Act.

The Permitting Process. The Corps' regulatory process involves both general permits for actions by private landowners that are similar in nature and will likely have a minor effect on wetlands and individual permits for more significant actions. According to the Corps, it evaluates more than 85,000 permit requests annually. Of those, more than 90% are authorized under a general permit, which can apply regionally or nationwide, and is essentially a permit by rule, meaning the proposed activity is presumed to have a minor impact, individually and cumulatively. Most general permits do not require pre-notification or prior approval by the Corps. About 9% of all permits are required to go through the more detailed evaluation for a standard individual permit, which may involve complex proposals or sensitive environmental issues and can take 180 days or longer for a decision. Less than 0.3% of permits are denied; most other individual permits are modified or conditioned before issuance. About 5% of applications are withdrawn prior to a permit decision. In FY2003 (the most recent year for which data are available), Corps-issued permits authorized activities having a total of 21,330 acres of wetland impact, while those

permits required that 43,379 acres of wetlands be restored, created, or enhanced as mitigation for the authorized losses.[6]

Regulatory procedures on individual permits allow for interagency review and comment, a coordination process that can generate delays and an uncertain outcome, especially for environmentally controversial projects. EPA is the only federal agency having veto power over a proposed Corps permit; EPA has used its veto authority fewer than a dozen times in the 30-plus years since the program began. However, critics have charged that implied threats of delay by the FWS and others practically amount to the same thing. Reforms during the Reagan, earlier Bush, and Clinton Administrations streamlined certain of these procedures, with the intent of speeding up and clarifying the Corps' full regulatory program, but concerns continue over both process and program goals.

Controversy also surrounded revised regulations issued by EPA and the Corps in May 2002, which redefine two key terms in the 404 program: "fill material" and "discharge of fill material." The agencies said that the revisions were intended to clarify certain confusion in their joint administration of the program due to previous differences in how the two agencies defined those terms. However, environmental groups contended that the changes allow for less restrictive and inadequate regulation of certain disposal activities, including disposal of coal mining waste, which could be harmful to aquatic life in streams. The Senate Environment and Public Works Committee held a hearing in June 2002 to review these issues, and legislation was introduced to reverse the agencies' action by clarifying in the law that fill material cannot be composed of waste, but no further action occurred.[7] Similar legislation was introduced in the 108th and 109th Congresses, and has again been introduced in the 110th Congress (H.R. 2169, the Clean Water Protection Act).

Nationwide Permits. Nationwide permits are a key means by which the Corps minimizes the burden of its regulatory program. A nationwide permit is a form of general permit which authorizes a category of activities throughout the nation and is valid only if the conditions applicable to the permit are met. These general permits authorize activities that are similar in nature and are judged to cause only minimal adverse effect on the environment, individually and cumulatively. General permits minimize the burden of the Corps' regulatory program by authorizing landowners to proceed without having to obtain individual permits in advance.

The current program has few strong supporters, for differing reasons. Developers say that it is too complex and burdened with arbitrary restrictions. Environmentalists say that it does not adequately protect aquatic resources. At issue is whether the program has become so complex and expansive that it cannot either protect aquatic resources or provide for a fair regulatory system, which are its dual objectives.

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[6] U.S. Army, Corps of Engineers, "Regulatory Statistics, All Permit Decisions, FY2003." See [http://www.usace.army.mil/cw/cecwo/reg/2003webcharts.pdf].

[7] For additional information, see CRS Report RL31411, *Controversies over Redefining "Fill Material" Under the Clean Water Act*, by Claudia Copeland.

Nationwide permits are issued for periods of no longer than five years and thereafter must be reissued by the Corps. On March 12, 2007, the Corps issued a package of nationwide permits, replacing those that had been in effect since 2002. The 2007 permits establish six new nationwide permits (for a total of 49) to authorize emergency repairs of damaged levees, fills, or uplands; time-sensitive repairs of pipelines; discharges into ditches and canals; commercial shellfish aquaculture activities; coal re-mining sites; and underground coal mining activities in waters of the United States. The permits also revise a number of existing permits and general terms and conditions that apply to all nationwide permits.[8]

Citizen groups have filed lawsuits seeking to halt the Corps' use of one of its nationwide permits, NWP 21, to authorize a type of coal mining practice called mountaintop mining. These critics contend that the adverse environmental impacts of activities authorized by NWP 21 are far greater than the "minimal adverse effects" limits prescribed by the Clean Water Act for all nationwide permits. In 2004, a federal district court in West Virginia ruled that NWP 21 violates the CWA by authorizing activities that have more than minimal adverse environmental effects. The district court's ruling was overturned on appeal. Another lawsuit challenging the applicability of nationwide permits to mountaintop mining in Kentucky also has been filed and is pending.[9]

Section 404 authorizes states to assume many of the Corps' permitting responsibilities. Two states, Michigan (in 1984) and New Jersey (in 1992), have done this. Others have cited the complex process of assumption, the anticipated cost of running a program, and the continued involvement of federal agencies because of statutory limits on waters that states could regulate as reasons for not joining these two states. Efforts continue to encourage more states to assume program responsibility.

Section 404 Judicial Proceedings: *SWANCC* and *Rapanos*. The Section 404 program has been the focus of numerous lawsuits, most of which have sought to narrow the geographic scope of the regulatory program. In that context, an issue of long-standing controversy is whether isolated waters are properly within the jurisdiction of Section 404. Isolated waters (those that lack a permanent surface outlet to downstream waters) which are not physically adjacent to navigable surface waters often appear to provide few of the values for which wetlands are protected, even if they meet the technical definition of a wetland. In January 2001, the Supreme Court ruled on the question of whether the CWA provides the Corps and EPA with authority over isolated waters and wetlands. The Court's 5-4 ruling in *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers* (531 U.S. 159) held that the denial of a Section 404 permit for disposal on isolated wetlands solely on the basis that migratory birds use the site exceeds the authority provided in the CWA. The full extent of retraction of the regulatory program resulting from this decision remains unclear, even more than seven years after the

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[8] U.S. Department of Defense, Department of the Army, Corps of Engineers, "Reissuance of Nationwide Permits; Notice," 72 *Federal Register* 11091-11198, March 12, 2007.

[9] For background, see CRS Report RS21421, *Mountaintop Mining: Background on Current Controversies*, by Claudia Copeland.

ruling. Environmentalists believe that the Court misinterpreted congressional intent on the matter, while industry and landowner groups welcomed the ruling.[10]

Policy implications of how much the decision restricts federal regulation depend on how broadly or narrowly the opinion is applied, and since the 2001 Court decision, other federal courts have issued a number of rulings that have reached varying conclusions. Some federal courts have interpreted *SWANCC* narrowly, thus limiting its effect on current permit rules, while a few read the decision more broadly. However, in April 2004, the Court declined to review three cases that support a narrow interpretation of *SWANCC*. Environmentalists were pleased that the Court rejected the petitions, but attorneys for industry and developers say that the courts will remain the primary battleground for CWA jurisdiction questions, so long as neither the Administration nor Congress takes steps to define jurisdiction.

The government's view on the key question of the scope of CWA jurisdiction in light of *SWANCC* and other court rulings came in a legal memorandum issued jointly by EPA and the Corps in January 2003.[11] It provides a legal interpretation essentially based on a narrow reading of the Court's decision, thus allowing federal regulation of some isolated waters to continue (in cases where factors other than the presence of migratory birds may exist, thus allowing for assertion of federal jurisdiction), but it calls for more review by higher levels in the agencies in such cases. Administration press releases said that the guidance demonstrates the government's commitment to "no-net-loss" wetlands policy. However, it was apparent that the issues remained under discussion, because at the same time, the Administration issued an advance notice of proposed rulemaking (ANPRM) seeking comment on how to define waters that are under the regulatory program's jurisdiction. The ANPRM did not actually propose rule changes, but it indicated possible ways that Clean Water Act rules might be modified to further limit federal jurisdiction, building on *SWANCC* and some of the subsequent legal decisions. The government received more than 133,000 comments on the ANPRM, most of them negative, according to EPA and the Corps. Environmentalists and many states opposed changing any rules, saying that the law and previous court rulings call for the broadest possible interpretation of the Clean Water Act (and narrow interpretation of *SWANCC*), but developers sought changes to clarify interpretation of the *SWANCC* ruling.

In December 2003, EPA and the Corps announced that the Administration would not pursue rule changes concerning federal regulatory jurisdiction over isolated wetlands. The EPA Administrator said that the Administration wanted to avoid a contentious and lengthy rulemaking debate over the issue. Environmentalists and state representatives expressed relief at the announcement. Nonetheless, interest groups on all sides have been critical of confusion in implementing the 2003 guidance, which constitutes the main tool for interpreting the reach of the *SWANCC* decision. Environmentalists remain concerned about diminished protection resulting

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[10] For additional information, see CRS Report RL30849, *The Supreme Court Addresses Corps of Engineers Jurisdiction Over 'Isolated Waters': The SWANCC Decision*, by Robert Meltz and Claudia Copeland.

[11] See [http://www.epa.gov/owow/wetlands/guidance/SWANCC/index.html].

from the guidance, while developers said that without a new rule, confusing and contradictory interpretations of wetland rules likely will continue. In that vein, a Government Accountability Office (GAO) report concluded that Corps districts differ in how they interpret and apply federal rules when determining which waters and wetlands are subject to federal jurisdiction, documenting enough differences that the Corps has begun a comprehensive survey of its district office practices to help promote greater consistency.[12] Concerns over inconsistent or confusing regulation of wetlands have also drawn congressional interest.[13]

In response to continuing controversies about the 2003 guidance, on May 18, 2006, the House adopted an amendment to a bill providing FY2007 appropriations for EPA (H.R. 5386). The amendment (passed by a 222-198 vote) would have barred EPA from spending funds to implement the 2003 policy guidance. Supporters of the amendment said that the 2003 guidance goes beyond what the Supreme Court required in *SWANCC,* has allowed many streams and wetlands to be unprotected from development, and has been more confusing than helpful. Opponents of the amendment predicted that it would make EPA's and the Corps' regulatory job more difficult than it already is. The 109th Congress adjourned in December 2006 before taking final action on this appropriations bill; thus no further action occurred.

Federal courts continue to have a key role in interpreting and clarifying the *SWANCC* decision. In February 2006, the Supreme Court heard arguments in two cases brought by landowners (*Rapanos v. United States*; *Carabell v. U.S. Army Corps of Engineers*) seeking to narrow the scope of the CWA permit program as it applies to development of wetlands. The issue in both cases had to do with the reach of the CWA to cover "waters" that were not navigable waters, in the traditional sense, but were connected somehow to navigable waters or "adjacent" to those waters. (The act requires a federal permit to discharge dredged or fill materials into "navigable waters.") Many legal and other observers hoped that the Court's ruling in these cases would bring greater clarity about the scope of federal regulatory jurisdiction.

The Court's ruling was issued on June 19, 2006 (*Rapanos et ux., et al., v. United States*, 126 S.Ct. 2208 (2006)). In a 5-4 decision, a plurality of the Court, led by Justice Scalia, held that the lower court had applied an incorrect standard to determine whether the wetlands at issue are covered by the CWA. Justice Kennedy joined this plurality to vacate the lower court decisions and remand the cases for further consideration, but he took different positions on most of the substantive issues raised by the cases, as did four other dissenting justices.[14] Legal observers suggest that the implications of the ruling (both short-term and long-term) are far from clear. Because the several opinions written by the justices did not draw a clear line

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[12] U.S. Government Accountability Office, *Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction*, GAO-04-297, February 2004, 45 pp.

[13] U.S. Congress, House of Representatives, Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment, *Inconsistent Regulation of Wetlands and Other Waters*, Hearing 108-58, 108th Cong., 2nd sess., March 30, 2004.

[14] For additional information, see CRS Report RL33263, *The Wetlands Coverage of the Clean Water Act Is Revisited by the Supreme Court: Rapanos and Carabell,* by Robert Meltz and Claudia Copeland.

regarding what wetlands and other waters are subject to federal jurisdiction, one likely result is more case-by-case determinations and continuing litigation. There also could be renewed pressure on the Corps and EPA to clarify the issues through an administrative rulemaking. The Senate Environment and Public Works Committee held a hearing on issues raised by the Court's ruling on August 1, 2006. Members and a number of witnesses urged EPA and the Corps to issue new guidance to clarify the scope of the ruling.

On June 5, 2007 — nearly one year after the *Rapanos* ruling — EPA and the Corps did issue guidance to enable their field staffs to make CWA jurisdictional determinations in light of the decision.[15] According to the guidance, the agencies will assert regulatory jurisdiction over certain waters, such as traditional navigable waters and adjacent wetlands. Jurisdiction over others, such as non-navigable tributaries that do not typically flow year-round and wetlands adjacent to such tributaries, will be determined on a case-by-case basis, to determine if the waters in question have a significant nexus with a traditional navigable water. The guidance details how the agencies should evaluate whether there is a significant nexus. The guidance is not intended to increase or decrease CWA jurisdiction, and it does not supersede or nullify the January 2003 guidance, discussed above, which addressed jurisdiction over isolated wetlands in light of *SWANCC*.

In accompanying documents, EPA and the Corps said that the Administration is considering a rulemaking in response to the *Rapanos* decision, but they noted that developing new rules to interpret the decision would take more time than issuing the guidance. They also noted that, while the guidance provides more clarity for how jurisdictional determinations will be made concerning non-navigable tributaries and their adjacent wetlands, legal challenges to the scope of CWA jurisdiction are likely to continue. The guidance was effective immediately, but the agencies also solicited public comments for a six-month period. Further changes could follow, after reviewing the public comments, the agencies said.

While the issue of how regulatory protection of wetlands is affected by the *SWANCC* and *Rapanos* decisions continues to evolve, the remaining responsibility to protect affected wetlands falls on states and localities. Whether states will act to fill in the gap left by removal of some federal jurisdiction is likely to be constrained by budgetary and political pressures, but a few states (Wisconsin and Ohio, for example) have passed new laws or amended regulations to do so. In comments on the 2003 ANPRM, many states said that they do not have authority or financial resources to protect their wetlands, in the absence of federal involvement.

Legislation to reverse the *SWANCC* and *Rapanos* decisions has been introduced in the 110th Congress (H.R. 2421 and S. 1870, the Clean Water Authority Restoration Act of 2007); similar legislation was introduced in the 108th and 109th Congresses. It would provide a broad statutory definition of "waters of the United States"; is intended to clarify that the CWA is meant to protect U.S. waters from pollution, not just maintain their navigability; and include a set of findings to assert constitutional

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[15] The guidance and related documents are available at [http://www.epa.gov/owow/wetlands/guidance/CWAwaters.html].

authority over waters and wetlands. Other legislation to restrict regulatory jurisdiction was introduced in the 109th Congress (H.R. 2658), but not yet reintroduced in the 110th Congress. It sought to narrow the statutory definition of "navigable waters" and define certain isolated wetlands and other areas as not being subject to federal regulatory jurisdiction. It also would give the Corps sole authority to determine Section 404 jurisdiction, for permitting purposes.

The House Transportation and Infrastructure Committee held hearings on H.R. 2421 and related jurisdictional issues on July 17 and July 19, 2007. Another hearing was held April 16, 2008. The full Senate Environment and Public Works Committee held a hearing on issues related to the *Rapanos* ruling on December 13, 2007, and held a legislative hearing on S. 1870 on April 9, 2008. Proponents of the legislation argue that Congress must clarify the important issues left unsettled by the Supreme Court's 2001 and 2006 rulings and by the recent Corps/EPA guidance. Bill sponsors argue that the legislation would "reaffirm" what Congress intended when the CWA was enacted in 1972 and what EPA and the Corps have subsequently been practicing until recently, in terms of CWA jurisdiction. But critics assert that the legislation would expand federal authority, and thus would have unintended but foreseeable consequences that are likely to increase confusion, rather than settle it. Critics question the constitutionality of the bill, arguing that, by including all non-navigable waters in the jurisdiction of the CWA, it exceeds the limits of Congress's authority under the Commerce Clause. Supporters contend that the legislation is properly grounded in Congress's commerce power.

In light of the widely differing views of proponents and opponents, future prospects for this legislation are uncertain. The Administration has not taken a position on any legislation to clarify the scope of "waters of the United States" protected under the CWA.[16] One difficulty of legislating changes to the CWA in order to protect wetlands results from the fact that the complex scientific questions about such areas (see discussion above, "Wetlands: Information and Science") are not easily amenable to precise resolution in law. The debate over revising the act highlights the challenges of using the law to do so.

Should All Wetlands Be Treated Equally? Under the Section 404 program, there is a perception that all jurisdictional wetlands are treated equally, regardless of size, functions, or values. In reality, this is not the case, because the Corps' general permits do provide accelerated regulatory decisions for many activities that affect wetlands. However, this perception has led critics to focus on situations where a wetland has little apparent value, but the landowner's proposal is not approved or the landowner is penalized for altering a wetland without a federal permit. Critics believe that one possible solution may be to have a tiered approach for regulating wetlands. Several legislative proposals introduced in past Congresses would establish multiple tiers (typically three) — from highly valuable wetlands that should receive the greatest protection to the least valuable wetlands where alterations might usually be allowed. Some states (New York, for example) use such an

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[16] For additional information, see CRS general distribution memorandum, "Analysis of the Clean Water Restoration Act of 2007, H.R. 2421 and S. 1870," by Claudia Copeland and Robert Meltz, October 3, 2007.

approach for state-regulated wetlands. The Corps and EPA issued guidance to field staff emphasizing the flexibility that currently exists in the Section 404 program to apply less vigorous permit review to small projects with minor environmental impacts.

Three questions arise: (1) What are the implications of implementing a classification program? (2) How clearly can a line separating each wetland category be defined? (3) Are there regions where wetlands should be treated differently? Regarding classification, even most wetland protection advocates acknowledge that there are some situations where a wetland designation with total protection is not appropriate. But they fear that classification for different degrees of protection could be a first step toward a major erosion in overall wetland protection. Also, these advocates would probably like to see almost all wetlands presumed to be in the highest protection category unless experts can prove an area should receive a lesser level of protection, while critics who view protection efforts as excessive, would seek the reverse.

Locating the boundary line of a wetland can be controversial when the line encompasses areas that do not meet the image held by many. Controversy would likely grow if a tiered approach required that lines segment wetland areas. On the other hand, a consistent application of an agreed-on definition may lead to fewer disputes and result in more timely decisions.

Some states have far more wetlands than others. Different treatment has been proposed for Alaska because about one-third of the state is designated as wetlands, yet a very small portion has been converted. Legislative proposals have been made to exempt that state from the Section 404 program until 1% of its wetlands have been lost. Some types of wetlands are already treated differently. For example, playas and prairie potholes have somewhat different definitions under swampbuster (discussed below), and the effect is to increase the number of acres that are considered as wetlands. This differential treatment contributes to questions about federal regulatory consistency on private property.

Agriculture and Wetlands

National surveys more than two decades ago indicated that agricultural activities had been responsible for about 80% of wetland loss in the preceding decades, making this topic a focus for policymakers seeking to protect the remaining wetlands. Congress responded by creating programs in farm legislation starting in 1985. The 110th Congress has enacted legislation to reauthorize farm programs through 2012 (Food, Conservation, and Energy Act of 2008, P.L. 110-246). Conservation programs in the farm bill use both disincentives and incentives to encourage landowners to protect and restore wetlands. Swampbuster and the Wetlands Reserve Program are the two largest efforts, but others such as the Conservation Reserve Program's wetland and buffer acres pilot program and the Conservation Reserve Enhancement Program, are also being used to protect wetlands. The 2008 farm bill authorized new programs that could further assist such activities. The most recent wetland loss survey conducted by the NRCS (comparing data from 1997 and 2002) indicates that there was a small annual increase for the first time since these data have

been collected, of 26,000 acres.[17] However, the agency warns that statistical uncertainties preclude concluding with certainty that gain is actually occurring. Wetlands were a major topic of discussion in debate on the 2008 farm bill.

Members of the farm community have expressed a wide range of views about wetland protection, from strong opposition to strong support. These views are frequently framed in the context of two general concerns about wetland protection efforts. First, as a philosophical matter, some object to federal regulation of private lands, regardless of the societal values those lands might provide. Second, many farmers want certainty and predictability about the land they farm to limit their financial risk. Therefore, if wetlands are located on a property that they farm, they want assurances that the boundary line delineating wetlands will remain where located for as long as possible.

Swampbuster. Swampbuster, enacted in 1985, uses disincentives rather than regulations to protect wetlands on agricultural lands. It removes a farmer's eligibility from all government price and income support programs for activities such as draining, dredging, filling, leveling or otherwise altering a wetland. Swampbuster has been controversial with farmers concerned about redefining an appropriate federal role in wetland protection on agricultural lands, and with wetland protection advocates concerned about inadequate enforcement. Since 1995, the NRCS has made wetland determinations only in response to requests because of uncertainty over whether changes in regulation or law would modify boundaries that have already been delineated. NRCS has estimated that more than 2.6 million wetland determinations have been made and that more than 4 million may eventually be required.

Swampbuster amendments in 1996 (P.L. 104-127) granted producers greater flexibility by making changes, such as: exempting swampbuster penalties when wetlands are voluntarily restored; providing that prior converted wetlands are not to be considered "abandoned" if they remain in agricultural use; and granting good-faith exemptions. They also encourage mitigation, established a mitigation banking pilot program, and repealed required consultation with the FWS. Amendments enacted in the 2008 farm bill will require an additional layer of review within USDA for compliance with swampbuster.

Other Agricultural Wetlands Programs. Under the Wetland Reserve Program (WRP), enacted in 1990, landowners receive payments for placing easements on farmed wetlands. It provides long-term technical and financial assistance to landowners with the opportunity to protect, restore, and enhance wetlands on their property, and to establish wildlife practices and protection. The 2002 farm bill reauthorized the program through FY2007 and raised the enrollment cap to 2,275,000 acres, with 250,000 acres to be enrolled annually. NRCS has also taken administrative actions implementing this program, such as announcing a new enhancement program on the lower Missouri River in Nebraska to enroll almost 19,000 acres at a cost of $26 million, working with several public and private partners, in June 2004.

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[17] See [http://www.nrcs.usda.gov/technical/NRI/2003/nri03wetlands.html].

Through FY2005, 9,226 projects had enrolled 1.744 million acres, and easements have been perfected on 1.37 million of those acres. A majority of the easements are in three states: Louisiana, Mississippi, and Arkansas. Most of the land is enrolled under permanent easements, while only about 10% is enrolled under 10-year restoration agreements, according to data supplied by NRCS in support of its FY2007 budget request. Prior to the 2002 farm bill, farmer interest had exceeded available funding, which may help to explain why Congress raised the enrollment ceiling in that legislation.

The 2008 farm bill increased the WRP maximum enrollment cap from 2.275 million acres to 3.014 million acres and expanded eligible lands to include certain types of private and tribal wetlands, croplands, and grasslands, as well as lands that meet the habitat needs of wildlife species. The bill made certain program changes, including specifying criteria for ranking program applications, and requiring USDA to submit a report to Congress on long-term conservation easements under the program. The legislation authorized a new Wetlands Reserve Enhancement Program, which will allow USDA to enter into agreements with states in order to leverage federal funds for wetlands protection and enhancement.

The 2002 farm bill expanded the 500,000-acre wetland and buffer acreage pilot program within the Conservation Reserve Program (CRP) to a 1-million-acre program available nationwide. CRP allows producers to enter into 10- to 15-year contracts to install certain conservation practices. The 2008 farm bill amended the pilot program to increase the amount of acreage that states can enroll (up to 100,000 acres, or a national maximum of one million acres). Participants must agree to restore wetland hydrology, establish appropriate vegetation, and refrain from commercial use of the land. The wetland and buffer program may become more important to overall protection efforts in the wake of the *SWANCC* decision, discussed above, which limited the reach of the Section 404 permit program to many small wetlands that are isolated from navigable waterways. Through September 2006, more than 166,000 acres had been enrolled in this program through more than 10,000 contracts, with about 70,000 of those acres in Iowa.

In August 2004, the Administration announced a new Wetland Restoration Initiative to allow enrollment of up to 250,000 acres of large wetland complexes and playa lakes located outside the 100-year floodplain in the CRP after October 1, 2004. The Administration estimated that implementation of this initiative will cost $200 million. Participants receive incentive payments to help pay for restoring the hydrology of the site, as well as rental payments and cost sharing assistance to install eligible conservation practices.

The 2008 farm bill included amendments for several agriculture conservation programs, including the Environmental Quality Incentives Program (EQIP), the Farmland Protection Program, and the Wildlife Habitat Incentive Program, in ways that may have incidental protection benefits for wetlands, because of higher funding levels or because of program changes. For example, EQIP supports the installation or implementation of structural and management practices, and the 2008 farm bill expands the program to include practices that enhance wetlands. Finally, some programs could less directly help protect wetlands, including the Conservation

Security Program (renamed the Conservation Stewardship Program), which provides payments to install and maintain practices on agricultural lands; the new Agricultural Water Enhancement Program (replacing the previous Ground and Surface Water Conservation Program; it is funded through EQIP), which is designed to address water quality and quantity concerns on agricultural land; and several other programs to better manage water resources.[18]

Agricultural Wetlands and the Section 404 Program. The CWA Section 404 program applies to qualified wetlands in all locations, including agricultural lands. But the Corps and EPA exempt "prior converted lands" (wetlands modified for agricultural purposes before 1985) from Section 404 permit requirements under a memorandum of agreement (MOA), and since 1977 the Clean Water Act has exempted "normal farming activities." The Supreme Court's *SWANCC* decision apparently exempts certain isolated wetlands from Corps jurisdiction; NRCS estimated that about 8 million acres in agricultural locations might be exempted by this decision. In December 2002, the Supreme Court affirmed a lower court decision, without comment, that deep ripping to prepare wetland soils for planting was more than a "normal farming activity" and therefore subject to Section 404 requirements.

While these exemptions and the MOA displease some protection advocates, they have probably dampened some of the criticism from farming interests over federal regulation of private lands. On the other hand, how NRCS responds to the *SWANCC* decision on isolated wetlands and other judicial rulings could cause that criticism to rise. The prospect that Congress might enact legislation to reverse the Court's 2001 and 2006 rulings, discussed above, has particularly alarmed farm groups, who fear that changes in law or regulations could negatively affect their activities. The Corps and NRCS have been unsuccessful in revising the MOA since 1996 despite a decade of negotiation, although they signed a very general partnership agreement on July 7, 2005. Some of the wetlands that fall outside Section 404 requirements as a result of judicial decisions can now be protected if landowners decide to enroll them into the revised farmable wetlands program or under other new initiatives.

Private Property Rights and Landowner Compensation

An estimated 74% of all remaining wetlands in the coterminous states are on private lands. Questions of federal regulation of private property stem from the argument that land owners should be compensated when a "taking" occurs and alternative uses are prohibited or restrictions on use are imposed to protect wetland values. The U.S. Constitution provides that property owners shall be compensated if private property is "taken" by government action. The courts generally have found that compensation is not required unless all reasonable uses are precluded. Many individuals or companies purchase land with the expectation that they can alter it. If that ability is denied, they contend, then the land is greatly reduced in value. Many argue that a taking should be recognized when a site is designated as a wetland. In

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[18] For more information on these provisions, see CRS Report RL34557, *Conservation Provisions of the 2008 Farm Bill*, by Tadlock Cowan and Renee Johnson.

2002, the Supreme Court held that a Rhode Island man, who had acquired property after the state enacted wetlands regulation affecting the parcel, is not automatically prevented from bringing an action to recover compensation from the state. Instead, the court ruled that the property retained some economic use after the state's action. *(Palazzolo v. Rhode Island*, 533 U.S. 606, 2002).

Congress, while under Republican control, explored these wetlands property rights issues on several occasions. An example is an October 2001 hearing by the House Transportation and Infrastructure Committee, Subcommittee on Water Resources and the Environment.[19] Recent Congresses have considered, but did not enact, property rights protection proposals. Democratic leadership appears less interested in bringing attention to this topic. The Bush Administration has not stated an official position on these types of proposals.[20]

Wetland Restoration and Mitigation

Federal wetland policies during the past decade have increasingly emphasized restoration of wetland areas. Much of this restoration occurs as part of efforts to mitigate the loss of wetlands at other sites. The mitigation concept has broad appeal, but implementation has left a conflicting record. Examination of this record, presented in a June 2001 report from the National Research Council, found it to be wanting. The NRC report said that mitigation projects called for in permits affecting wetlands were not meeting the federal government's "no net loss" policy goal for wetlands function.[21] Likewise, a 2001 GAO report criticized the ability of the Corps to track the impact of projects under its current mitigation program that allows in-lieu-fee mitigation projects in exchange for issuing permits allowing wetlands development.[22] Both scientists and policymakers debate whether it is possible to restore or create wetlands with ecological and other functions equivalent to or better than those of natural wetlands that have been lost over time. Results so far seem to vary, depending on the type of wetland and the level of commitment to monitoring and maintenance. Congress has repeatedly endorsed mitigation in recent years.

The Louisiana Experience. Much of the attention to wetland restoration has focused on Louisiana, where an estimated 80% of the total loss of U.S. coastal wetlands has occurred (coastal wetlands are about 5% of all U.S. wetlands). The current rate of loss is more than 15,000 acres per year, a decline from higher rates in

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[19] U.S. Congress, House of Representatives, Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment, *The Wetland Permitting Process: Is It Working Fairly?* Hearing 107-50, 107th Cong., 1st sess., October 3, 2001.

[20] For more information, see CRS Report RL30423, *Wetlands Regulation and the Law of Property Rights "Takings"*, by Robert Meltz.

[21] National Academy of Sciences, National Research Council, *Compensating for Wetland Losses under the Clean Water Act* (Washington, DC: 2001), 267 pp.

[22] U.S. Government Accountability Office, *Wetlands Protection: Assessments Needed to Determine the Effectiveness of In-Lieu-Fee Mitigation*, GAO-01-325, 75 pp.

earlier years.[23] In response to these losses, Congress authorized a task force, led by the Corps, to prepare a list of coastal wetland restoration projects in the state, and also provided funding to plan and carry out restoration projects in this and other coastal states under the Coastal Wetlands Planning, Protection and Restoration Act of 1990, also known as the Breaux Act.[24] The projects range from reintroduction of freshwater and diversion of sediment to construction of shoreline barriers and planting of vegetation. In total, the estimated total cost to complete all 147 approved projects is $1.78 billion.

In a 2007 report, GAO reported that it is impossible to determine the collective success of restoring coastal wetlands in Louisiana, because of an inadequate approach to monitoring. GAO had reviewed the Breaux Act program to identify the types of projects that have been designed and lessons that have been learned from 74 projects that have been completed so far.[25] Others, including the National Oceanic and Atmospheric Administration, disagreed with GAO's findings, observing that long-term data being provided through ongoing project monitoring is intended to yield insight into qualitative and quantitative project performance.

In the wake of hurricanes Katrina and Rita in the summer of 2005, multiple legislative proposals were introduced to fund additional restoration projects already planned by the U.S. Army Corps of Engineers and to explore other opportunities that would restore and stabilize wetlands in southern Louisiana. Without remedial action, the net effect of these storms will likely be major permanent losses, especially along the coast. These losses are partially offset as some destruction was temporary and in a few situations, new wetlands were created. The extent of change and loss continues to be documented by federal agencies and others.[26] More specifically, before the hurricanes, Congress was considering legislation that would have provided about $2 billion to the restoration effort. Since the 2005 hurricanes, more expansive options costing up to $14 billion that were proposed in the 1998 report *Coast 2050* are also being considered.[27] S. 3711, the Gulf of Mexico Energy Security Act, was passed during the final days of the 109th Congress.[28] This legislation provides

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[23] Loss rates have been calculated by U.S. Geological Survey's Nation Wetlands Research Center, which has published a number of reports describing past and predicted loss rates.

[24] For information on this program, see CRS Report RS22467, *Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA): Effects of Hurricanes Katrina and Rita on Implementation*, by Jeffrey Zinn.

[25] U.S. Government Accountability Office, *Coastal Wetlands: Lessons Learned from Past Efforts in Louisiana Could Help Future Restoration and Protection*, GAO-08-130, 57 p.

[26] For additional information, see CRS Report RS22276, *Coastal Louisiana Ecosystem Restoration After Hurricanes Katrina and Rita*, by Jeffrey Zinn.

[27] For a more detailed discussion of the effects of the hurricanes on planning for wetland restoration, see CRS Report RS22276, *Coastal Louisiana Ecosystem Restoration After Hurricanes Katrina and Rita*, by Jeffrey Zinn.

[28] S. 3711 was attached to a broad tax relief measure that was enacted in December 2006 (H.R. 6111, P.L. 109-432). For additional information, see CRS Report RL33493, *Outer Continental Shelf: Debate over Oil and Gas Leasing and Revenue Sharing*, by Marc

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additional revenues to states adjacent to offshore oil and gas production activities. One of the purposes for which these revenues can be spent is wetland restoration, and the availability of these funds may affect the amount and scale of wetland restoration activity in the central Gulf Coast.

Other Federal Protection Efforts. Many federal agencies have been active in wetland improvement efforts in recent years. In particular, the Fish and Wildlife Service (FWS) has been promoting the success of its Partners for Fish and Wildlife program, which Congress reauthorized through FY2011 in P.L. 109-294. According to the program website, as of 2005, the program has worked with over 37,700 private landowners to restore 753,000 acres of wetland, 1.86 million acres of native grasslands and other uplands, and 6,806 miles of riparian and in-stream habitat and to remove 260 fish passage barriers.[29]

Other programs also restore and protect domestic and international wetlands. One of these derives from the North American Wetlands Conservation Act, reauthorized through FY2012 in P.L. 109-322 with an appropriations ceiling of $75 million annually. This act provides grants for wetland conservation projects in Canada, Mexico, and the United States. According to the FWS FY2007 budget notes, the United States and its partners have protected more than 18.5 million acres and restored, created, or enhanced an additional 5.9 million acres through almost 1,500 projects. The FWS has combined funding for this program with several other laws into what it calls the North American Wetlands Conservation Fund.

Under the Convention on Wetlands of International Importance, more commonly known as the Ramsar Convention, the United States is one of 134 nations that have agreed to slow the rate of wetlands loss by designating important sites. These nations have designated 1,229 sites since the convention was adopted in 1971. The United States has designated 19 wetlands, encompassing 3 million acres.

Mitigation. Mitigation also has become an important cornerstone of the Section 404 program in recent years. A 1990 MOA signed by the agencies with regulatory responsibilities outlines a sequence of three steps leading to mitigation: first, activities in wetlands should be avoided when possible; second, when they can not be avoided, impacts should be minimized; and third, where minimum impacts are still unacceptable, mitigation is appropriate. It directs that mitigated wetland acreage be replaced on a one-for-one functional basis. Therefore, mitigation may be required as a condition of a Section 404 permit.

Some wetland protection advocates are critical of mitigation, which they view as justifying destruction of wetlands. They believe that the Section 404 permit program should be an inducement to avoid damaging wetland areas. These critics also contend that adverse impacts on wetland values are often not fully mitigated and that mitigation measures, even if well-designed, are not adequately monitored or maintained. Supporters of current efforts counter that they generally work as

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[28] (...continued)
Humphries.

[29] See [http://ecos.fws.gov/partners/viewContent.do?viewPage=partners].

envisioned, but little data exist to support this view. Questions about implementation of the 1990 MOA and controversies over the feasibility of compensating for wetland losses further complicate the wetland protection debate.

In response to criticism in the NRC and GAO reports (discussed above), in November 2001, the Corps issued new guidance to strengthen the standards on compensating for wetlands lost to development. The guidance was criticized by environmental groups and some Members of Congress for weakening rather than strengthening mitigation requirements and for the Corps' failure to consult with other federal agencies. In December 2002, the Corps and EPA released an action plan including 17 items that both agencies believe will improve the effectiveness of wetlands restoration efforts.[30]

In March 2008, the Corps and EPA promulgated a mitigation rule to replace the 1990 MOA with clearer requirements on what will be considered a successful project to compensate for wetlands lost to activities like construction, mining, and agriculture.[31] The rule sets performance standards and criteria for three types of wetlands mitigation: mitigation banks, in-lieu programs, and permittee-responsible compensatory mitigation. It sets standards to mitigate the loss of wetlands and associated aquatic resources and is intended to improve the planning, implementation, and management of compensatory mitigation projects designed to restore aquatic resources that are affected by activities that disturb a half-acre or more of wetlands. It also is designed to help ensure no net loss of wetlands by addressing key recommendations raised in the 2001 NRC report. Under the rule, all compensation projects must have mitigation plans that include 12 fundamental components, such as objectives, site selection criteria, a mitigation work plan, and a maintenance plan.[32]

The concept of "mitigation banks," in which wetlands are created, restored, or enhanced in advance to serve as "credits" that may be used or acquired by permit applicants when they are required to mitigate impacts of their activities, is widely endorsed. Numerous public and private banks have been established, but many believe that it is too early to assess their success. In its recent study of mitigation, the Environmental Law Institute determined that as of 2005, there were 330 active banks, 75 sold out banks, and 169 banks seeking approval to operate.[33] Provisions in several laws, such as the 1996 farm bill and the 1998 Transportation Equity Act

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[30] U.S. Environmental Protection Agency and U.S. Army Corps of Engineers, "National Wetlands Mitigation Action Plan, December 24, 2002." See [http://www.epa.gov/owow/wetlands/pdf/map1226withsign.pdf].

[31] U.S. Army Corps of Engineers and Environmental Protection Agency, "Compensatory Mitigation for Losses of Aquatic Resources, Final Rule," 73 *Federal Register* 19594, April 10, 2008.

[32] Information on compensatory mitigation can be found at [http://www.epa.gov/wetlandsmitigation].

[33] For more information on mitigation generally, and mitigation banks specifically, see Environmental Law Institute, *2005 Status Report on Compensatory Mitigation in the United States*, April 2006, 105 pp.

(TEA-21), endorse the mitigation banking concept.[34] In November 2003, Congress enacted wetlands mitigation provisions as part of the FY2004 Department of Defense (DOD) authorization act (P.L. 108-136). Section 314 of that act directed DOD to make payments to wetland mitigation banking programs in instances where military construction projects would result or could result in destruction of or impacts to wetlands.

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[34] For more information on the early history of banking, see CRS Report 97-849, *Wetland Mitigation Banking: Status and Prospects*, by Jeffrey A. Zinn.