

## CHAPTER FIVE

### The Regulatory Mission

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The Corps has a responsibility to protect the nation's wetlands. By authority of the Federal Water Pollution Control Act Amendments of 1972, the Corps regulates activities that involve the discharge of dredge or fill material in waters of the United States – including wetlands. The St. Paul District, encompassing an area that contains more wetlands than any other Corps' district outside of Alaska, has played a significant role in the development of the Corps of Engineers regulatory program.

The protection of wetlands is an exceedingly political process, often pitting developers against environmentalists. In Minnesota and Wisconsin, the main threat to wetlands stemmed from agricultural activities. Farmers encountered new restrictions on what they were able to do with their own property. When environmental regulation impinged on private property rights, tension ran high. During one controversy in 1989, upset farmers posted a handbill on grain elevators and farm supply stores across western Minnesota lambasting the Corps. "Farmers Take Notice Now," this handbill read. "The U.S. Corps of Engineers is trying to tighten its stranglehold on all farm drainage with even stronger wording in Section 404 of the Clean Water Act ... Don't lose your right to improve your property. The Corps of Engineers has too much authority already. Don't give them anymore!"<sup>1</sup> A political cartoon in the Mankato, Minnesota, newspaper at this time showed a farm with a patch of cattails in the foreground. Sticking out of the cattails was a sign: "Property of the U.S. Government."<sup>2</sup> In order to implement an effective wetlands protection program in this political climate, the St. Paul District had to work assiduously to win the trust and cooperation of farmers and rural county governments. Owing in part to the farmers' outcry, Minnesota and Wisconsin both developed strong wetland protection programs at the state level. One way in which the St. Paul District distinguished itself nationally was through its innovative coordination with these two progressive state programs.

#### Minnesota and Wisconsin Wetlands

Much of the controversy surrounding wetlands protection stems from the complicated nature of this resource. Wetlands provide a variety of public values: for their role as filters in preserving water quality, for their function in absorbing water in time of flood and storing water in time of drought, for their importance to biota and for their recreational value to hunters, fishers and wildlife watchers. Yet wetlands can be difficult to recognize, classify and delineate. Even within a two-state area such as Minnesota and Wisconsin, wetlands are extremely varied. Types of wetlands include prairie potholes, shallow lakes, inland fresh meadows, marshes and swamps.

The prairie pothole region, a legacy of the Ice Ages, includes parts of Minnesota, Iowa, North Dakota and South Dakota in the United States and parts of Manitoba, Saskatchewan and Alberta in Canada. When the continental glaciers retreated more than 12,000 years ago, they left behind millions of depressions in the glacial drift. Today, these potholes trap rainwater and snowmelt to form isolated ponds of varying depths and sizes, each one an oasis of aquatic plants and animals. The region's climate is characterized by mid-continent extremes of temperature and precipitation. The potholes are replenished in spring when snowmelt runs off the frozen soil. Most precipitation falls in summer in the form of short, violent cloudbursts. Variations in spring temperatures and the amount of summer rainfall may result in a pothole drying up one year and remaining wet throughout the next.<sup>3</sup>

Prairie potholes provide breeding habitat for immense numbers of waterfowl. These wetlands are estimated to support more than fifty percent of all waterfowl in North America. In wet years, the percentage is even higher. Agricultural usage has made enormous inroads on this type of wetland in Minnesota, reducing the total area from approximately 12 to 3 million acres.<sup>4</sup> A national wetlands inventory produced by the U.S. Fish and Wildlife Service in 1984 described the prairie pothole region as one of nine "National Problem Areas."<sup>5</sup>

Another group of wetlands in Minnesota and Wisconsin that are of unusual importance are the patterned peatlands. These areas exhibit many distinct landforms, including string bogs, ovoid islands, teardrop islands, bogs and fens.<sup>6</sup> Like the prairie potholes, the peatlands are also a product of the Ice Ages. As the continental glaciers receded in northeastern Minnesota and northern Wisconsin, glacial meltwater periodically inundated the land. Drowned vegetation, instead of decomposing, accumulated in layers of organic sludge that turned to waterlogged peat. Today, these water-saturated, acid-peat soils form bogs. The bogs of northeastern Minnesota constitute the largest peatland complex in North America, while smaller bogs dot northern Wisconsin. Poor in nutrients, these bogs are colonized by sphagnum mosses, which in turn provide a mat for tenuous invasions by evergreen shrubs, tamarack and black spruce.<sup>7</sup>

In 1987, the St. Paul District published a pictorial field guide, *Wetland Plants and Plant Communities of Minnesota & Wisconsin*. Patterned after popular field guides to wildflowers and other plant communities, the book sought to make wetland ecosystems recognizable to general readers. The authors, Steve D. Eggers, ecologist with the St. Paul District, and Donald M. Reed, principal biologist for the Southeastern Wisconsin Regional Planning Commission, divided wetland plant communities in the two states into fifteen vegetation types. While the authors' focus on vegetation highlighted just one of three factors used in defining wetlands (it downplayed soil and hydrology), it emphasized the most visible feature. The book was offered as a companion to the more technical publication, *Wetlands and Water Quality: A Citizen's Handbook on How to Review Section 404 Permits*.<sup>8</sup>



**Wetlands: St. Paul District encompasses a variety of wetland types. (Photo courtesy of Steve D. Eggers, St. Paul District, Corps of Engineers)**

Eggers and Reed followed the wetland classification system developed by John Curtis in *The Vegetation of Wisconsin* (1971). They divided the wetland vegetation types between two major floristic provinces, the first characterized by “prairie-forest” and the second by “northern forest.” The transition or “vegetation tension zone” between the two provinces divided both states approximately in half on a meandering northwest-southeast diagonal running from Roseau County, Minnesota, to Milwaukee County, Wisconsin. The prairie-forest floristic province, included the eastern edge of the prairie pothole region. The authors classified wetland plant communities into eight types: shallow, open water communities, marshes, inland fresh meadows, bogs, shrub swamps, wooded swamps, floodplain forests and seasonally-flooded basins (prairie potholes). Most of these classifications included at least two subclassifications. One noteworthy subclass comprised calcareous fens – distinguished by wet, seepage sites where calcium and magnesium bicarbonates and sulfates in the soil surface restricted vegetation to a select group of calcium-tolerant plants. Calcareous fens exhibited the rarest plant community in Minnesota and Wisconsin, and probably one of the rarest in North America. The fens usually had a disproportionate number of rare, threatened or endangered plant species.<sup>9</sup>

It has been estimated that Minnesota contained more than 18 million acres of wetlands – an area amounting to one-third of the state – prior to non-Indian settlement.<sup>10</sup> In Minnesota, as in other regions, agricultural interests spearheaded the assault on wetlands. In the mid-nineteenth-century, settlers moved into the region and began at once to drain wetlands in order to bring more land under cultivation. These early settlers, many of whom were immigrants from Germany, Ireland, Scandinavia and other European countries, soon obtained active support of the state government, which saw the large-scale conversion of wetlands as a public good. The state government was abetted by the Federal Swamp Lands Acts of 1849-50, which granted inundated lands to states. In 1861, Governor Alexander Ramsey of Minnesota addressed the state legislature on wetlands: “From their nature and situation they are capable of easy reclamation. In a climate so dry as ours, we may naturally expect that lands of this class will eventually be the most valuable in the state.”<sup>11</sup> Minnesota state laws promoted the formation of corporations for the purpose of draining lands. A state drainage commission oversaw all drainage ditch construction. Although the drought and economic depression of the 1930s temporarily halted wide-scale drainage efforts, the destruction of wetlands resumed in the 1940s and 1950s. While the state legislature of Minnesota began to enact laws for the conservation of wetlands – notably in response to the Pittman-Robertson Act of 1937, which offered federal funds to participating states for wildlife restoration projects – these measures were largely confined to public or navigable waters. It was not until 1973 that the Minnesota state legislature enacted a law that expanded the definition of public waters to include “all waters which serve a beneficial public purpose, thereby including wetlands.”<sup>12</sup> By this time, the total extent of Minnesota’s wetlands had been reduced by about half. In the prairie pothole region the loss of wetlands was much higher.

Conservation of wetlands in Minnesota and Wisconsin, as elsewhere, initially focused on their value as wildlife habitat. While wetlands generally drew public disdain because they inhibited most kinds of development, people appreciated the value of these forbidding landscapes as breeding grounds for ducks and other game birds. Beginning in the early twentieth century, the federal government began to set aside wetlands as bird refuges or wildlife refuges. The Fish and Wildlife Service sought to raise public awareness of the plight of duck populations whose breeding areas were drying up. At that time, both the prairie pothole region and the many sloughs along the Mississippi River gained national attention for their significance to waterfowl. During the 1930s and after, Congress enacted numerous laws aimed at coordinating protection of wetlands and other wildlife habitat with other land uses. Yet as long as wetlands protection remained narrowly focused on the conservation of wildlife, it could not withstand other social forces working toward the destruction of wetlands. In particular, the American belief in the sanctity of private property contributed to the demise of this resource, because wetlands almost invariably became more economically productive when they were drained. With the rise of environmental awareness in the 1960s, public policy toward wetlands began to change. Perhaps no other type of environment in the United States underwent such dramatic change in land use and public policy as wetlands.

## Origins of the Section 404 Program

The Corps' authority to regulate use of the navigable waters of the United States dates from the early years of the Republic and derives from the federal government's constitutional power to regulate interstate and foreign commerce. The Corps' regulatory program took more specific form in the River and Harbor Act of 1899, which prohibited obstructions to navigability of waters of the United States. Section 10 of the act required the Department of the Army to issue a permit for any work involving navigable waters, including dredge and fill operations. Section 13 required a federal permit for any discharge of refuse matter except liquid sewage into navigable waters or their tributaries. Although the law extended the Corps' regulatory jurisdiction to areas upstream from navigable waters, in practice the regulatory function was limited to protection of navigation. Consequently, the Secretary of War and the Chief of Engineers used their authority judiciously on activities affecting navigation, rarely addressing matters concerning the environment.<sup>13</sup>

Decades later, in response to growing public concern for the environment, the Corps enlarged the scope of its regulatory function in 1968 to include not just the effect of a proposed action on navigation but also its effects on fish and wildlife, water quality, ecology and the general public interest. The following year, Congress passed the National Environmental Policy Act of 1969, or NEPA, which required all federal agencies with regulatory functions to prepare a detailed Environmental Impact Statement for permit actions that would significantly affect the quality of the human environment. NEPA specifically mandated that the review process involve public input and that it take an interdisciplinary approach by considering ecological, social and economic impacts. In response to NEPA, the Corps expanded its regulatory program to include interdisciplinary teams engaged in a general public interest review process, but its main focus remained on navigable waterways. This changed with the Federal Water Pollution Control Act Amendments of 1972, Federal Water Pollution Control Act, or Clean Water Act.<sup>14</sup>

The Federal Water Pollution Control Act established a national goal of eliminating discharge of pollution into waters by 1985. The law placed the Environmental Protection Agency in charge of a permitting program aimed at stopping pollution at its source.<sup>15</sup> While the Environmental Protection Agency had primary responsibility for the program, Section 404 of the act required the Corps assist the Environmental Protection Agency in its mission, stating in part: "The Secretary of the Army, acting through the Chief of Engineers, may issue permits, after notice and opportunity for public hearings[,] for the discharge of dredged or fill material into the navigable waters at specified disposal sites." The Federal Water Pollution Control Act defined navigable waters as "the waters of the United States, including the territorial seas." Given the law's ambitious goal to eliminate water pollution by 1985, Environmental Protection Agency interpreted the law liberally to include tributaries of navigable waters. The Corps initially insisted upon a narrow interpretation of "waters of the United States" based on navigation, but environmentalists pressed the Corps through court action to take a more expansive view of its Section 404 authority.

In 1975, environmentalists won a landmark decision in *Natural Resources Defense Council v. Callaway*. District Judge Aubrey Robinson held that the Corps' definition of "waters of the United States" was too narrow and must be revised in accordance with Congress's intent in the Federal Water Pollution Control Act. In the court's opinion, Congress had intended that the Federal Water Pollution Control Act provide for the exercise of "federal jurisdiction over the nation's waters to the maximum extent permissible under the Commerce Clause of the Constitution." As a result of this decision, the Corps, in cooperation with Environmental Protection Agency and with input from environmental organizations, prepared four alternative regulations for publication in the *Federal Register*.<sup>16</sup>

While this effort was underway, however, Corps' leadership continued to argue that a broad construal of its Section 404 authority to include wetlands would create a public outcry and a political backlash against the federal program. Although Corps' leaders obtained support for their position from the Department of Agriculture and the Department of Commerce, they failed to convince either the Department of the Interior or the Department of Justice, which refused to appeal the *Callaway* decision. Nor could Corps' officials get any policy guidance on Section 404 from the White House. As a result, senior officials in the Office of the Chief of Engineers determined to state their case directly to the American people through a press release. In so doing, they hoped to prompt congressional review of the Section 404 program and clarify congressional intent. To elicit a public response, officials directed the Public Affairs Office to craft a press release that would grab media attention and provoke widespread public opposition to the permit program. Released on the same day that the alternative regulations were published in the *Federal Register*, the press release warned that "millions of people may be presently violating the law" and stated that convicted offenders could be "subject to fines up to \$25,000 a day and one year imprisonment." The St. Paul District, together with other districts, helped disseminate the information.<sup>17</sup>

The press release succeeded in provoking a public outcry. Thousands of protests poured into congressional offices. The *New York Times* accused the Corps of attempting a power grab. Secretary of Agriculture Earl Butz condemned the proposed regulation as a "dangerous extension of the long hand of the federal government into the affairs of private citizens." One official was quoted as stating that the Corps, lacking other means, would rely on farmers to snitch on one another in order to ensure compliance with its Section 404 permits. Environmental groups, meanwhile, lambasted the Corps for misrepresenting the facts and for attempting to sabotage the court ruling in *Callaway*.<sup>18</sup>

While the press release earned notoriety, it drew thousands of comments on the proposed regulations in the *Federal Register*. The Washington, D.C., office received more than 4,500 written comments from governors, congressmen, federal, state and local agencies, as well as organizations and individuals in the private sector. Working with the Environmental Protection

Agency, the Corps issued an interim draft of revised regulations on July 25, 1975. The Corps then developed a public relations plan to sell its wetlands protection program, which it launched on September 4, 1975. District engineers were to inform the public that the “Corps of Engineers will be reasonable, moderate, objective and practical in administering the program.” Brigadier General Kenneth McIntyre, Acting Director of Civil Works, explained the Section 404 program to state administrators. “The farming, ranching, and lumbering industries can rest assured that plowing, cultivating, seeding and harvesting will continue to be permitted without regulation,” he said.<sup>19</sup>

During the next two years, Congress held hearings on the controversial Section 404. Various bills were introduced to modify or clarify the Corps’ regulatory authority. Early in 1977, Congressman John Breau (D-Louisiana) introduced a bill that would dramatically curtail the Corps’ Section 404 jurisdiction, eliminating federal safeguards for about seventy-five percent of the nation’s wetlands. Breau had strong ties to development interests on the Lower Mississippi. With backing from House Majority Leader Jim Wright of Texas, the measure passed in the House by a wide margin. The Senate voted down the bill, but in joint conference later that year, the measure was used as a bargaining chip to extract concessions in a further set of amendments to the law. Congress passed the amendments on December 15, 1977, and President Carter signed them into law thirteen days later. The amended law was called the Clean Water Act of 1977. Environmentalists claimed victory insofar as the law affirmed the Corps’ Section 404 jurisdiction as established by *Callaway*. But opponents won key exemptions from the permit process for normal farming, ranching, and silviculture activities, including minor ditch and road construction. In another key concession, states were allowed to administer portions of the permit program as soon as they would adopt regulatory standards deemed acceptable by the Environmental Protection Agency and the Corps – a prerogative that Minnesota and Wisconsin would both exercise about a decade later.<sup>20</sup>

The Clean Water Act of 1977 was a turning point in wetlands protection. From 1972 to 1977, the main issue surrounding Section 404 was whether Congress would repeal Section 404 (or amend it so drastically as to make it ineffective). After 1977, congressional support for Section 404 was no longer in doubt and the program acquired legitimacy. In the years ahead, the program would continue to be controversial, but environmentalists and developers would debate how to make it function better rather than argue over whether to implement or scrap the program.<sup>21</sup> During these formative years from 1972 to 1977, the Corps improved its relationship with environmental organizations – at least with regard to its regulatory mission. Historian Jeffrey K. Stine investigated the origins of the Section 404 program and concluded that the Corps’ performance after 1975 won the respect of the environmental community. “Throughout the controversy over the extent of the Corps’ jurisdiction under Section 404, environmental groups rarely tried to reduce the power of the Corps or to slow it down, as they had done repeatedly in the area of civil works,” Stine wrote. “Despite occasional disagreements over individual

permit decisions, a new basis for cooperation was clearly established.”<sup>22</sup>

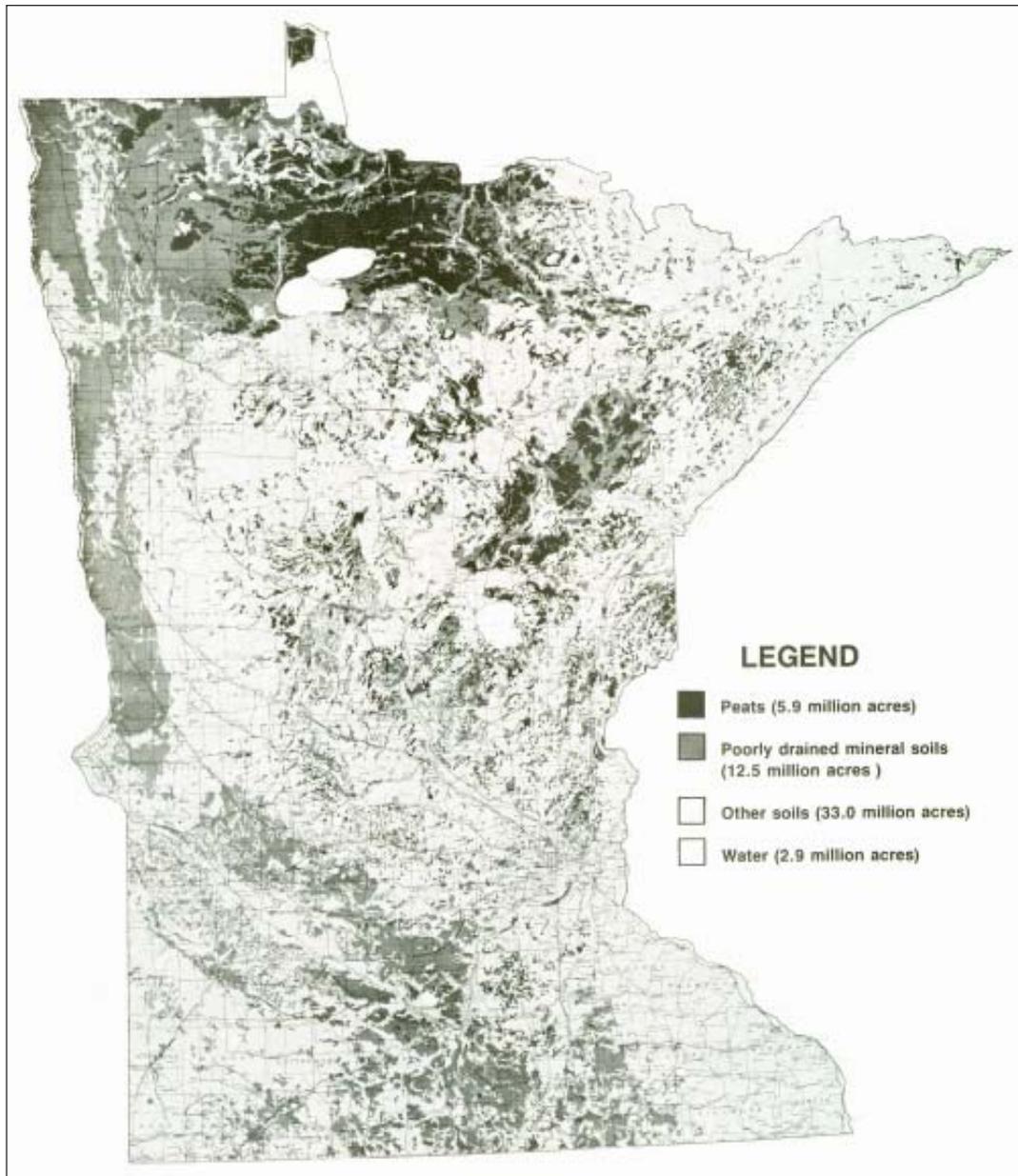
### **Establishing a Section 404 Program in the St. Paul District**

The St. Paul District faced an overwhelming task in assuming its Section 404 responsibilities in the 1970s. With some ten million acres of wetlands in Minnesota and five million acres in Wisconsin, no other Corps’ district outside of Alaska contained so many wetlands, and few Corps’ districts would process as many Section 404 permit applications. Moreover, the political landscape within the St. Paul District was challenging. Farmers in Minnesota and Wisconsin (and North Dakota, which remained within the district’s regulatory purview in the 1970s) were highly suspicious of the program. Many county governments reflected the farmers’ concerns. On the other hand, the large urban populaces of Minnesota and Wisconsin generally supported strong environmental regulations for protecting water quality. Reflecting these urban-based values, the Minnesota and Wisconsin state governments demanded higher standards for wetlands protection than most other states in the nation, while the North Dakota state government gave priority to protecting the state’s farm-based economy.<sup>23</sup>

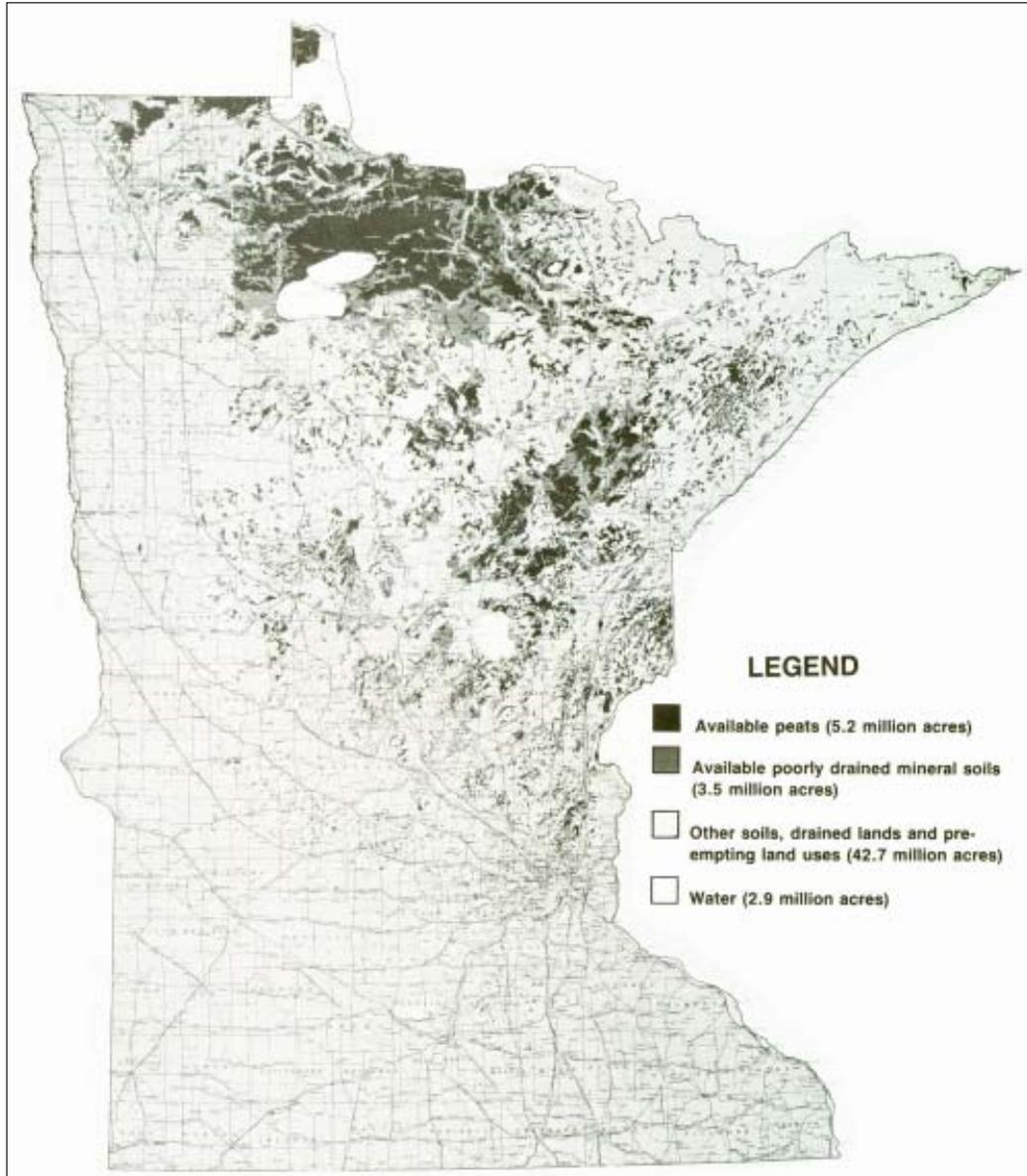
The St. Paul District phased in the Section 404 program over a two-year period, gradually applying the permitting requirements to wider geographic areas. In the first phase, from July 1975 to September 1976, the Corps required permits for discharges into the tributaries of navigable waters and wetlands adjacent to navigable waters. In the second phase, from September 1976 to July 1977, it required permits for discharges into tributaries of navigable waters and wetlands adjacent to those tributaries. Finally, beginning in July 1977, the program was extended to all water bodies in the district including mud holes, ponds, backwaters, lakes, rivers and streams.<sup>24</sup>

Initially, the Regulatory Branch had two sections. The permit evaluation section did all the preliminary work on each permit application. After establishing a permit file, making the public notice and receiving comments from other agencies and interested parties, the permit evaluation section turned over each permit application to the research and analysis section for an environmental assessment. The latter section was composed of biologists. After the biologists completed their work, the permit evaluation section could issue the permit – usually under certain conditions to protect the environment. By 1977, it had become clear that the Corps needed to track whether the permit holder complied with the terms of the permit, so it formed a third section, the surveillance and enforcement section. In time, the St. Paul District had about eight or nine investigators working in the surveillance and enforcement section alone.<sup>25</sup>

Ben Wopat, a long-time senior official in the St. Paul District office, joined the Corps in April 1976 when the district’s Regulatory Branch was beginning to increase staff. Initially, Wopat was one of just four personnel in the unit. As the program expanded, the surveillance and enforcement section quickly outgrew its office space on the eleventh floor of the old Post Office building and had to relocate two floors below. There was no formal change in the organizational



Wetlands: Original Minnesota wetlands. (Map courtesy of U.S. Fish and Wildlife Service)



Wetlands: Existing Minnesota wetlands. (Map courtesy U.S. Fish and Wildlife Service)

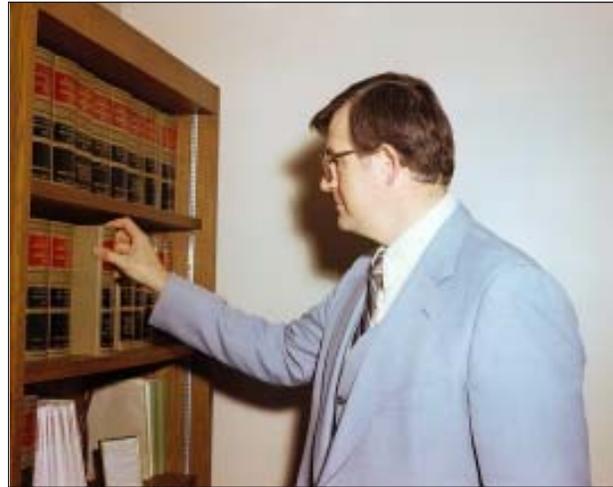
structure, but the staff group was physically set apart and was informally perceived within the organization as “the investigators down on the 9th floor.” The staff came from a variety of academic disciplines other than engineering. Wopat, for example, had a law degree, as well as a master’s degree in history. While the rest of the organization was providing public services and building flood control projects, the Regulatory Branch was busy controlling development. “We were the guys with the black hats,” Wopat wryly recalled in a recent interview. “Here we were down here telling people what they could not do with their own property. It was heathen and communistic.”<sup>26</sup>

The demands on the Regulatory Branch were enormous. By the time the Section 404 program was fully operational in 1977, the St. Paul District covered an estimated 9 million acres of wetlands in Minnesota, Wisconsin and North Dakota. After two-and-a-half years, the staff processed some six hundred twenty permits involving 10,040 acres of wetlands. Approximately two-thirds of the applications resulted in permits, while the Corps and the applicants resolved most of the remainder by modifying the proposed action so that it did not require a permit. Only a handful of applications were rejected without some kind of alternative resolution for the applicant. During the same period, the Regulatory Branch authorized another 300 projects under general permits and issued nearly three hundred permits under Section 10 of the River and Harbor Act of 1899. The latter, so-called Section 10 permits, allowed placement of structures in navigable waters.

Despite this effort, the St. Paul District’s regulatory staff cautioned that a huge amount of activity was occurring without regulation. Using information obtained from state programs, the Corps estimated that unauthorized actions during the same two-and-a-half-year period covered a whopping 1.8 million acres. Most of the noncompliance resulted from public ignorance of the law. To tackle this problem, Corps’ personnel joined state officials on various speaking tours. As public awareness of the Clean Water Act requirements spread, the ratio of unauthorized versus authorized projects diminished. St. Paul District officials believed that as of December 1977, the Section 404 program covered most major projects that posed significant threats to wetlands.<sup>27</sup>

Public ignorance of the law was not the only problem, however. Sometimes developers purposely skirted the Corps’ regulatory authority or opposed it in court. In 1978, Ron McDaniels applied for a permit to build a Toyota car dealership in Maplewood, a suburb of St. Paul. The Ramsey County Soil and Water Conservation District found the proposed development site, which bordered a county drainage ditch, to be “critical” for filtering pollutants and sediments that would otherwise run into nearby Kohlman Lake. Moreover, if the site were blacktopped to accommodate the car lot, area homes would be prone to flood damage. Both the Ramsey-Washington Metro Watershed District Board and the Corps found the site to be a wetland, and the Corps finally denied McDaniels’ federal permit application in the summer of 1979. McDaniels then sued the Corps, arguing that the site was not a wetland. Soon, the Maplewood City Council aligned itself with McDaniels, while a homeowners association opposed the developer. In the

spring of 1980, District Court Judge Miles Lord ruled in McDaniels' favor: according to the judge, the site was not a wetland. But this did not end the matter. Four days after the court ruling, the Minnesota state legislature passed a law that placed the proposed development site under the jurisdiction of the Minnesota Department of Natural Resources. This extraordinary action by the state legislature forced McDaniels to work with the Minnesota Department of Natural Resources and the Corps after all.<sup>28</sup>



**Ben Wopat, December 1981. (Photo by Lyle Nicklay, courtesy of St. Paul District, Corps of Engineers)**

As the St. Paul District's regulatory staff tried to raise public awareness of the Clean Water Act permitting requirements, they sometimes encountered frustration from members of the public who did not know who to contact for permit applications. In most cases, a developer such as Ron McDaniels had to satisfy three levels of government: federal, state and county. Sometimes, the situation demanded a permit from a municipality as well. The St. Paul District regulatory staff developed a single application form that could be filled out by the applicant and supplied to all four offices – federal, state, county and municipal. As a result, instead of going through a series of permit application processes, the applicant could initiate one process and all four offices would proceed simultaneously. Some state officials resisted the uniform application form but eventually became convinced that a joint federal-state application form best served the public.<sup>29</sup>

Just as Wopat had to work with multiple state offices on this issue, so too did state officials have to work with more than one district of the Corps of Engineers. Because of the need for public outreach and coordination with multiple levels of government, Wopat argued that the Section 404 program would be strengthened if the St. Paul District's jurisdiction followed political rather than watershed boundaries. With the support of his district engineer, and eventually under orders from Corps' headquarters, Wopat negotiated with his counterparts in neighboring districts to achieve a realignment of St. Paul District boundaries for purposes of the Section 404 regulatory program. First, by mutual agreement, the St. Paul District relinquished its small portion of Iowa in exchange for the Rock Island District's little piece of Minnesota and the Rock River watershed in Wisconsin. Next, the St. Paul District gave up its portion of North Dakota to the Omaha District. Then it exchanged the Upper Peninsula of Michigan for the Detroit District's Fox River watershed and its Lake Michigan watershed in Wisconsin. Finally, it obtained from the Chicago District the southeastern corner of Wisconsin. By this series of mutual agreements, the

St. Paul District's Section 404 program came to serve all of Minnesota and Wisconsin and no parts of other states. In some other parts of the nation, districts followed this lead so that Section 404 permitting conformed to state lines rather than watershed boundaries.<sup>30</sup>

## **Nationwide Permit 26 and the Rise of State Programs**

In order to process tens of thousands of Section 404 permit applications annually, the Corps developed a two-tiered approach using *individual* and *general* permits. Individual permits involved large or unusual actions that required a full public interest review. General permits involved small, routine actions that were believed to have minimal environmental impact. Once the Corps determined an action could be handled under a general permit, the action was essentially pre-approved and did not need to undergo the same level of public notice and review. For example, Corps' headquarters developed a general permit for bank stabilization projects. If a proposed bank stabilization project could be designed to meet the environmental conditions specified by the general permit, the permitting process was considerably expedited. Although the general permits dealt with relatively benign actions, they were significant because of the cumulative environmental impact of so many similar but separate actions going forward under one set of standards. At best, the two-tiered approach facilitated an appropriate scaling of effort that discouraged excessive regulation. At worst, it was no more than a form of triage for dealing with loss of wetlands on many fronts. Environmentalists viewed the Corps' approach in this negative light and focused on general permits as the weak link in the Section 404 program. In time, state agencies responsible for wetlands protection began to share environmentalists' concerns.

The two-tiered approach to Section 404 permitting won congressional approval in the Clean Water Act amendments of 1977. Immediately, the Corps began to develop a number of "nationwide" (general) permits to address various activities. One of these permits, Nationwide Permit 26 (NWP 26), covered actions that involved discharges of dredged material above headwaters and in isolated waters (such as prairie potholes). NWP 26 provided a vehicle for the Corps to handle the vast geographic scope of Section 404. As such, it was the only nationwide permit to deal with a type of wetland environment rather than a type of construction activity.<sup>31</sup> For thousands of farmers in Minnesota and Wisconsin whose property included wetland, NWP 26 offered a fast track through the Section 404 process.

With the advent of the Reagan Administration in 1981, Corps' leadership anticipated a rollback in the Section 404 program. Ronald Reagan had campaigned for president on a platform of smaller government. He fervently believed in reducing government red tape. In particular, he wanted to ease the burden of environmental protection for agriculture and industry. His primary tactic in bringing about regulatory reform, it soon became clear, was to starve selected regulatory programs of funds. As Secretary of the Interior James Watt explained, "We will use the budget system [as] the excuse to make major policy decisions."<sup>32</sup> Reagan's appointee to oversee the

Army Corps, Assistant Secretary of the Army for Civil Works William R. Gianelli, immediately began to study alternatives for shrinking the Section 404 program. Broader use of nationwide permits – with the reduction in federal oversight that that shift entailed – was central to his plan.

In July 1982, the Corps published a revision of Section 404 regulations. The new rules included a broadening of NWP 26 authority.<sup>33</sup> A coalition of environmental organizations filed suit in U.S. District Court in Washington, D.C., charging that the new rules would exempt millions of acres of wetlands from the requirement to obtain individual permits to dispose of dredged material, violating the intent of the Clean Water Act. While administration officials defended the new rules as necessary in the face of limited funding, environmentalists accused the administration of “abandoning the nation’s wetlands under the guise of regulatory reform.”<sup>34</sup>

State agencies in Minnesota and Wisconsin also criticized the new rules. The Minnesota Pollution Control Agency citizens’ board voted unanimously to sue the Corps on the basis that the NWP-26 permit would not require state review of the proposed action. According to one Minnesota Pollution Control Agency official, the new rules would lift state authority over vast peat bogs in northern Minnesota, as well as several million acres of waterfowl-rich marshes in the prairie pothole region.<sup>35</sup>

St. Paul District Engineer Colonel William W. Badger supported the rollback of Section 404 regulations in principle. He responded favorably to the Reagan Administration’s emphasis on cutting red tape and pushing economic development. He was impatient with those whom he called “termites” in the agency, the low-level technocrats who eschewed action in favor of further study and deliberation. However, he was also mindful that the people of Minnesota and Wisconsin were more supportive of environmental regulations than the nation as a whole. “We in the St. Paul District are in a very environmentally sensitive region,” he told an interviewer in July 1981. “We have the potholes, the wetlands, and the 10,000 lakes and the people that we serve are locked in step to preserve these wetlands.” Consequently, Colonel Badger wanted to work with the Minnesota and Wisconsin Departments of Natural Resources and adapt Section 404 regulations to meet their requirements. The St. Paul District ought to “fine-tune” and “retain” the Section 404 program, Badger held, rather than “roll it back.”<sup>36</sup>

Badger encouraged Ben Wopat and others in the regulatory branch to negotiate with state officials in the Minnesota and Wisconsin DNRs over adjustments to NWP 26 and other nationwide permits. The idea was to modify the rules to reflect regional conditions – both environmental and political. As a result of these discussions, the Wisconsin DNR published state guidelines in November 1982. The Minnesota DNR completed its guidelines in April 1984. These efforts laid the groundwork for a more comprehensive effort to coordinate wetlands protection at the federal and state levels through the development of programmatic general permits with each state. The programmatic general permit defined various actions affecting wetlands that fell

within both federal and state jurisdiction. Any action that required an application for a programmatic general permit would be reviewed by federal and state agencies. The arrangement satisfied state officials that they would not be bypassed in the federal permitting process, especially where NWP 26 was employed. Federal officials, for their part, received assurance that the review process would not become bogged down; both the Corps and the DNRs were committed to respond to programmatic general permits applications within ten days. In addition, the district engineer had discretionary authority to require an individual permit for any area outside the purview of the programmatic general permit that he considered to be sensitive. The district engineer invoked this authority to protect those rare and minuscule wetlands known as calcareous fens.<sup>37</sup> By the mid-1980s, the St. Paul District was a leader in developing coordinated federal and state procedures to fulfill the purposes of Section 404 of the Clean Water Act.

In the meantime, the lawsuit brought by environmental groups over NWP 26 was settled out of court. According to the settlement terms, NWP 26 was rewritten so it was limited to projects that would impact up to ten acres of wetlands in headwaters or isolated waters. Any project that would impact more than ten acres would no longer be authorized under the nationwide permit. Moreover, the Corps would take a closer look at projects that would impact one to ten acres. Any project that would impact more than one acre would require public notice.

Environmentalists still distrusted the intent of NWP 26. In the 1990s, they attacked the ten-acre limit as too lenient; however, for the time being it was allowed to stand. The Corps issued the new regulations, including modification of NWP 26, in October 1984.

## **Wetlands Delineation**

One of the most controversial aspects of wetlands protection was how to define a wetland. Even after Congress and the courts resolved the issue of whether the “waters of the United States” extended to wetlands, the problem remained of establishing guidelines so that people could agree on where wetlands ended and uplands began. In general, wetlands were defined as areas inundated or saturated by water at a frequency and duration sufficient to support plants that were adapted to saturated soil conditions. Ecologists recognized wetlands by the vegetation that grew on them. Experts could not agree on specific guidelines, however, and the public remained befuddled about what constituted a wetland. Gradually, it became apparent that the Corps needed a scientifically sound and workable definition – one that could be applied in the field with consistency so that the jurisdictional boundaries of Section 404 were made clear.

The Corps’ generous use of NWP 26 in the early 1980s fueled the controversy over wetlands delineation. Environmentalists argued that many thousands of acres of wetlands were being destroyed each year under NWP 26 authorizations. Regulators noted that without uniform standards as to what constituted a wetland, environmentalists’ estimates concerning the total extent and rate of loss of wetlands had to be treated circumspectly. Farmers, for their part, were leery of

any definition of wetlands that could bring previously converted wetlands – croplands that were lying fallow, for example – under the Clean Water Act’s purview. In short, environmentalists, regulators and farmers all had their own agendas for wetlands delineation. The question of what is a wetland, though posed to science, stemmed from politics.



**Wetlands: This cartoon depicts farmers’ frustration with federal wetlands policy. Farmers saw wetlands (with accompanying federal regulations) encroaching upon their farms, especially where abandoned agricultural drainage ditches bordered**

Nowhere, perhaps, was wetland delineation more controversial than in Minnesota, where county drainage ditches crisscrossed the countryside, forming a peculiar network of man-made wetlands. The ditches had been constructed in the early decades of the twentieth century to drain wetlands and render adjoining areas suitable for agriculture. Often, they ran parallel to county roads. The ditches gradually filled with debris, which interrupted the flow of water, so that they had to be periodically cleaned to keep them functional. For decades, county ditch boards oversaw the maintenance of ditches on a public need basis, but many ditches had been abandoned and the county ditch boards had ceased to exist. As counties fell behind on maintenance, the process of land conversion was reversed. The ditches clogged, the water ceased to flow and the surrounding area returned to wetlands. As these clogged ditches became less effective in draining surrounding agricultural fields, the resulting wetlands performed a new function: they acted as filters to absorb farm chemicals and other pollutants that would otherwise flow into natural streams and rivers. Moreover, they provided habitat for wildlife. The Corps was bound by the Clean Water Act to protect these linear wetlands, but rural county governments saw the Corps’ responsibility as an intrusion into local affairs. Speaking on behalf of the public need for a particular ditch repair, Meeker County Commissioner Steve Dille expressed a concern common to many rural residents when he remarked, “The thing that bothers me is the loss of local control and the need to contact Washington for permission.”<sup>38</sup>

As public awareness of wetlands increased, ditch improvement proposals often proved divisive among area residents. Farmers might desire ditch maintenance to get waterlogged fields back into production, while nearby townspeople preferred to protect downstream water quality. When controversy arose, the St. Paul District held public hearings to gather information that would assist in its determination of whether a permit served the public interest. In a notable example, the Corps scheduled a public hearing in Stevens County to garner testimony on a proposed ditch project. Proponents wanted to improve County Ditch 6 for drainage and flood control. Opponents claimed the ditch improvement would pollute the waters of Page Lake,

harming its recreational and economic value. Twice the meeting was postponed at the request of county officials. An editorial in the *Hancock Record* admonished readers to participate: “The upcoming public hearing concerning the proposed alteration of County Ditch 6 and Page Lake is perhaps the single most important hearing that the citizens of Hancock and surrounding area can ever attend.” When the hearing finally occurred in December 1981 in the town of Morris, Minnesota, population five thousand, some two hundred people packed the courthouse hearing room.<sup>39</sup> Evidently the public response served to kill the project.

Rural county governments often bristled at involvement by the Corps, even when the Corps sought to facilitate public review of project proposals. In 1986, the Corps denied a permit application to improve Ditch 5 in McLeod County, which lies in Minnesota’s prairie pothole region. Later that year, the Board of Commissioners of McLeod County narrowly approved a resolution that effectively barred future expansion of Ditch 5. The resolution, drafted by attorneys in the St. Paul District office for the county commissioners, sought to clear the way for Corps’ approval of a county permit application involving two other ditches. Two of the five commissioners opposed the resolution on the grounds that it smacked of “arm twisting” by the Corps.<sup>40</sup>

The problematic relationship between agricultural drainage ditches and wetlands was not unique to the St. Paul District, but the connection was perhaps more complex there than in any other part of the nation. Beginning about 1984, a wet cycle in the region’s climate caused water tables to rise, spurring counties to initiate ditch repair projects for the first time in many years. As with Ditch 5 in McLeod County, most of these projects went beyond maintenance, thereby threatening destruction not only of wetlands that had become reestablished along the ditch corridor itself, but wetlands in adjoining areas as well.<sup>41</sup> Insofar as regulators sought to distinguish between existing versus previously converted wetlands, ditch projects were particularly confounding.

The problem of defining wetlands undoubtedly perplexed rural residents more than it did urban residents, but it could turn up anywhere. In 1986, district ecologist Steve Eggers discovered a calcareous fen in Savage, a Minneapolis suburb. This rare type of wetland, blooming with plants and grasses that the state had classified as threatened species, was found at the end of a gravel road behind a concrete-panel casting factory. To the newspaper reporter who accompanied Eggers to the Savage fen site, the small spring-fed wetland looked like nothing but a “patch of weeds.” According to Eggers, the Corps was aware of three other calcareous fens in the Twin Cities metropolitan area.<sup>42</sup>

Eggers, like other Corps’ ecologists, recognized a wetland by the composition of wetland plant species. In theory, only certain species of plants could grow in water-saturated soils, and these plant species were then indicators of a wetland. Eggers’ field guide presented a classification scheme for wetland types. However, Eggers and other ecologists in the Corps increasingly

saw the need for a more precise and legally defensible method for delineating wetlands. In 1987, the Corps accordingly produced a manual. Based on seven years of research and testing, it offered numerical standards for the three basic attributes of wetlands – water, soil and vegetation. For example, the hydrology (water) standard included this requirement: to qualify as wetland, the soil must be inundated or saturated within major portions of the root zone (within twelve inches of the surface) during at least five percent of the growing season.<sup>43</sup>

However, the manual did not satisfy critics. The Reagan Administration directed four agencies, the EPA, the Corps, the Fish and Wildlife Service and the Soil Conservation Service, to develop standards that all four could agree upon; and in 1989, the agencies produced the “Joint Four-Agency Wetland Delineation Manual.” It was similar in most respects to the Corps’ 1987 manual. On the specific hydrology standard noted above, however, the 1989 manual stated soil must be inundated or saturated to a depth of six to eight inches for at least seven consecutive days during the growing season. This seemingly subtle difference marked the 1989 manual as more inclusive in its definition of a wetland.<sup>44</sup>

Pro-development critics blasted the 1989 manual primarily on the grounds that it would redefine millions of acres of farmland as wetland. Apparently by mistake, the 1989 manual included an estimated 53 million acres of farmland that had been exempted from Section 404 regulations under provisions of the Food Security Act of 1985. Also, critics complained that the hydrological definition was too broad and that the 1989 manual had not undergone a public review process.<sup>45</sup>

With wetland policy in the national limelight, newly elected President George H.W. Bush announced his administration’s goal of “no net loss of wetlands.” Bush called for a review and revision of the 1989 manual and appointed a panel of experts, the Federal Interagency Committee for Wetland Delineation, to accomplish this task. After a two-year study, the committee announced its findings. Taking a more restrictive view of wetlands than either the Corps’ 1987 manual or the four agencies’ 1989 manual, the committee’s draft revisions, if implemented, would have eliminated 50 million acres of widely recognized wetlands. Indeed, field testing of the proposed criteria revealed that parts of the Everglades in Florida and the Great Dismal Swamp in North Carolina would be excluded from federal jurisdiction. Now it was the environmentalists’ turn to cry foul. Coming to the environmentalists’ support, both the EPA and the Corps found the committee’s revisions were unscientific and unusable in the field.<sup>46</sup>

Congress responded to the uproar by requesting yet another study of wetlands delineation by the National Academy of Sciences. At the same time, Congress directed the Corps to drop its use of the 1989 manual in favor of its earlier 1987 guidelines. Other agencies followed suit in adopting the Corps’ original criteria for wetlands delineation. By the time the National Academy of Sciences completed its study in 1995, the controversy had subsided. The National Academy of

Sciences concluded that the existing federal wetlands regulatory program was scientifically sound and effective in most respects.<sup>47</sup>

## **Swampbuster**

In the spring of 1985, the House Agriculture Committee introduced a provision in the farm bill that would deny agricultural subsidies to any farmer who planted crops on wetlands. Known as “Swampbuster,” the provision was modeled on a similar conservation measure, called “Sodbuster,” which aimed at discouraging farmers on the Great Plains from plowing up new sod. Like Sodbuster, the Swampbuster provision would reverse outmoded farm policy that actually gave farmers incentive to convert wetlands to agriculture even when this action undermined wetland policy. The concept of pushing a conservation measure by tying it to eligibility for farm subsidies appealed to a Congress searching for ways to cut federal subsidies. It also appealed to environmental groups, including conservation-oriented farm groups such as the National Association of Conservation Districts.<sup>48</sup>

President Ronald Reagan signed the Food Security Act into law on February 23, 1985. According to the Swampbuster provision, any farmer who planted crops on wetlands after the date of the act would lose eligibility for commodity price supports, disaster payments, Farm and Home Administration loans and crop insurance. The law used a definition of wetlands similar to that developed by the Corps in its Section 404 regulations – based on soil, hydrology and vegetation. Drainage projects that were in progress could be completed if they had been initiated prior to February 23, 1985.<sup>49</sup>

Enforcement of Swampbuster fell primarily to the Soil Conservation Service in the U.S. Department of Agriculture. The Soil Conservation Service and the U.S. Fish and Wildlife Service jointly developed guidelines and disseminated them through state and county offices in March 1986. Like the Corps a decade earlier, the Soil Conservation Service acquired the enormous task of identifying and monitoring wetlands throughout farm country. Although it had some seven thousand personnel in the field, Soil Conservation Service agents were not trained to recognize wetlands nor were they anxious to do surveillance. Soil Conservation Service agents enjoyed the role of helping farmers negotiate the maze of federal programs, and they resisted assuming what amounted to a role reversal. “In small farm communities where everyone knew everyone and there was only one coffee shop to go to in the morning, the pressure not to enforce the provision was tremendous,” historian Ann Vileisis wrote.<sup>50</sup> Reported violations were rare, and sanctions against violators were even rarer.

In theory, Swampbuster should have buttressed the Section 404 program because farmers who violated their Section 404 permits could face additional penalties from the Soil Conservation Service. Initially, the Corps received excellent cooperation from Soil Conservation Service officials in sharing information on their respective programs. As Corps’ officials went from their

Soil Conservation Service contacts in state offices to Soil Conservation Service agents in the field, however, they found much less willingness on the part of the agents to assist with wetlands protection. Whereas the Soil Conservation Service agents had been “the guys in the white hats that were helping the farmers with programs,” Ben Wopat recalled, “all of a sudden here they were viewed as the bad guys who were now telling them what they couldn’t do rather than helping them do things that they wanted to do to improve or expand their agricultural production.”<sup>51</sup>

Farm groups objected to Swampbuster and vigorously lobbied for changes in the law when it came up for reauthorization in 1990. Congress made minor adjustments to Swampbuster in the Food, Agriculture, Conservation and Trade Act, which was signed into law on November 28, 1990. One key change was the introduction of graduated penalties for unintentional violations. Farmers were allowed one violation in ten years, and they stood to lose benefits of \$750 to \$10,000, depending on the severity of the violation. The law also redefined the Swampbuster prohibition itself. Rather than prohibiting the planting of crops in wetlands, it prohibited any act of draining, dredging, filling, leveling or otherwise altering wetlands to produce an agricultural commodity.<sup>52</sup>

While these amendments removed some of the teeth from Swampbuster, the program’s main shortcoming continued to be weak enforcement by the Soil Conservation Service and other federal agencies. Soil Conservation Service agents were supposed to report violations to the Agricultural Stabilization and Conservation Service, which oversaw local committees of farmers that were tasked to assess penalties. The Agricultural Stabilization and Conservation Service committees proved highly recalcitrant, granting “good faith” exemptions to hundreds of violators. In 1991, the National Wildlife Federation sued the Agricultural Stabilization and Conservation Service for granting exemptions to farmers who drained eighteen prairie potholes in the Yellow Medicine River watershed in Minnesota. The circuit court of appeals ruled that the farmers must restore the potholes or forfeit their farm subsidies. Despite this rebuke from the court, the Agricultural Stabilization and Conservation Service continued to issue exemptions. An audit of Agricultural Stabilization and Conservation Service actions in Nelson County, North Dakota, in 1993 revealed that the Agricultural Stabilization and Conservation Service granted exemptions in eleven of thirty randomly-selected cases. Other audits in 1993 disclosed \$1.2 million in subsidies paid to six farmers who had violated Swampbuster. Total forfeiture of subsidies under Swampbuster amounted to just \$12 million for the period 1986-1992. After the government subsequently restored a large portion of these subsidies, total penalties amounted to less than \$3,000 per farm for some five hundred forty-four violators.<sup>53</sup>

Critics also pointed out that the Soil Conservation Service was lax in mapping wetlands. In 1994, environmentalists compared Soil Conservation Service wetlands maps and Fish and Wildlife Service wetlands maps for twenty-one counties in Minnesota and found that the Soil

Conservation Service identified only fifty-seven percent of the area that the Fish and Wildlife Service identified as wetlands. Although officials in the two agencies refused to comment on the disparity, environmentalists charged that some 2,678 acres of wetland were “missing” from Soil Conservation Service maps in the twenty-one counties. Extrapolating from those counties to the rest of the state, environmentalists observed that “approximately 875,000 acres of Minnesota wetlands could have been drained with Soil Conservation Service consent.”<sup>54</sup>

Swampbuster revealed how difficult it was to protect wetlands when responsibility for wetlands protection was divided between multiple federal agencies. As Corps’ officials continually reminded the public, Section 404 was extremely broad in its reference to “the nation’s waters,” but it was narrow in its concern only with dredged and fill material. While the Corps had shown some success in defining what a wetland is, it was not responsible for mapping or inventoring wetlands or monitoring losses, and most experts agreed that the total extent of wetlands continued to shrink despite federal policy to promote “no net loss.”

### **Defining the Section 404(f) Farming Exemption**

As noted above, the Clean Water Act amendments of 1977 included a handful of exemptions, the most significant one being for normal farming activity. The exemptions were part of a larger compromise to recognize property rights in the national Section 404 program. When farmers faced the dual effects of Swampbuster and more restricted use of NWP 26, they countered by claiming exemption under Section 404(f) of the Clean Water Act. Like the Soil Conservation Service, the Corps did not want to engender widespread resistance to wetlands protection from the farm community, so it worked with farm groups to reach an understanding.

Agricultural drainage ditches once again forced the issue. In 1984 – an unusually wet year in Minnesota – a number of counties began taking steps to repair old drainage ditches. Since many of these ditches had been abandoned for several decades, it was questionable whether the ditch repairs should be defined as maintenance or new construction. The Corps initially chose to take all ditch repairs at their face value as maintenance, but environmental groups protested. After environmental groups sued the Corps in District Court in Washington, D.C., the Corps changed its position. The Corps published regulations on November 22, 1985, requiring permits for all drainage projects that would expand the original size of the ditch.<sup>55</sup>

One of the first counties to respond to this change of policy was Stearns County, in central Minnesota, where several ditch improvement projects were underway. The county duly applied for Section 404 permits for each project, and then placed a moratorium on the work pending the Corps’ response. In the meantime, the Stearns County commissioners passed a resolution calling on the Association of Minnesota Counties and the U.S. Congress to prevail on the Corps to revise its policy to accord with the definition of ditch repairs used by the Minnesota DNR. According to



**Farming and wetlands: Section 404 permitting addressed encroachment of wetlands by cropland development such as seen in these photographs. (Courtesy of Steve D. Eggers, St. Paul District, Corps of Engineers)**

the Minnesota DNR, all ditch repairs constituted maintenance. One such project in Becker County in northwest Minnesota called for restoring a ditch to its condition in 1920. The project was classified as “repair” in the hope that the Corps would not require a permit. County commissioners recognized that defining the project as a “repair” was something of a charade, because in practical terms it did not make sense to restore ditches to their original shape. “Nobody wants to do that,” conceded Don Ogaard, president of the Wild Rice Watershed District, “because that’s the reason they eroded in the first place. They want to change the design and backslope and properly slope the sides.”<sup>56</sup>

During the next year, the St. Paul District denied numerous applications for ditch repairs on the grounds that they would drain surrounding wetlands. In particular, the Corps noted that most “repair” projects included construction of new lateral ditches and placement of new tile drain systems, not to mention enlargement of the original ditch.<sup>57</sup> But with hundreds of thousands of dollars already invested in planning, county governments were stung by these permit denials. Moreover, farmers with standing water on their fields could not obtain relief. Resentment toward federal regulators grew.<sup>58</sup> One newspaper headline announced with obvious irony: “Flooded county ditches create ‘wetlands’ in federal view.”<sup>59</sup>

In January 1987, the St. Paul District hosted a meeting of federal and state regulators to discuss differences of interpretation over ditch repairs. Ben Wopat headed the team of Corps’ staff, Doug Ehorn represented the Environmental Protection Agency and others attended from the Soil Conservation Service, the Minnesota DNR and the Minnesota Pollution Control Agency. Wopat explained that the Corps’ current interpretation of the exemption was that the project qualified as “maintenance” if it returned the ditch to its original size and configuration. There was a presumption that this would not bring a drained wetland into a new use but would restore earlier agricultural land use. Ehorn stated that the Environmental Protection Agency wondered whether “legitimate farming” had ever been done on lands that had long since returned to wetlands. They were also skeptical of ditches that dated back to the 1910s and 1920s that had never seen any maintenance. The meeting pointed to the need for interagency agreement on what constituted ditch maintenance.<sup>60</sup>

At Wopat’s initiative, District Engineer Colonel Joseph Briggs detailed Wopat to work with Doug Ehorn of the Environmental Protection Agency’s Region 5 office in Chicago. Their task was to develop an enforceable standard that would measure whether an area had been subjected to regular if not continuous farming use. Only then would their agencies certify that a project would not convert an area of wetland to a new use. The result of their deliberations was a joint policy for the St. Paul District known as the “51-51 policy.” Colonel Briggs announced the policy on November 23, 1987.<sup>61</sup>

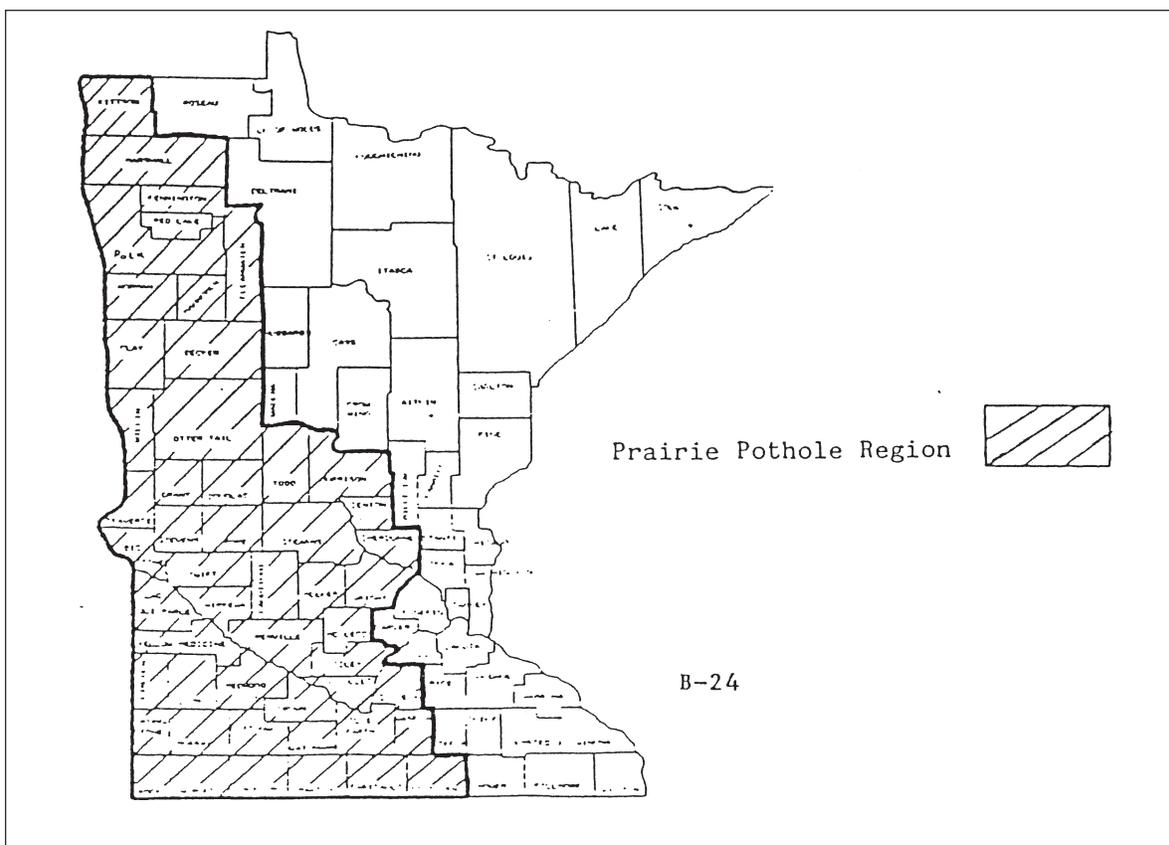
The policy called for a dual test that measured both the extent and duration of past farming

in a given area. To qualify for the Section 404(f) exemption, it was necessary to show that 51 percent of the wetlands physically connected to a drainage ditch had been subject to the plowing, seeding and cultivating agricultural cycle for fifty-one percent of the time for which credible agricultural records existed and were available. In addition to the “51-51 test,” the policy affirmed the Corps’ requirement that the ditch must be returned to its original condition. It was the applicant’s responsibility to document the original size and configuration of the ditch by providing such evidence as engineering plans, soil borings and contractor records. The record of past agricultural usage would be documented through aerial photos, crop histories, agricultural subsidy records and personal statements.<sup>62</sup>

As the 51-51 policy was implemented, the St. Paul District found the historical assessment to be a labor-intensive exercise, yet the results were illuminating. “We’d draw out the drainage basin, and take a look at the aerial maps – usually they went back to about 1936, ‘37, and we’d bring them up to the present,” Wopat recalled. “And we’d look at the span of fifty or sixty years and we would look at how much wetland there was adjacent to that ditch and how much of it actually was reflected as being cropped during those years.”<sup>63</sup> In most cases, the project did not meet the 51-51 test. Indeed, during the next eighteen months, the St. Paul District evaluated twenty ditch maintenance permit applications, of which it granted three and denied seventeen.<sup>64</sup>

The 51-51 policy caused further dismay in the farm community and contributed to a sudden flap over another proposed rule change by the St. Paul District in the winter of 1988-1989. The controversial proposal pertained specifically to the prairie pothole region. It designated fifty-one counties in western Minnesota – covering the prairie pothole region – as exempt from NWP 26. This nationwide permit applied to dredge and fill actions that would impact wetlands in headwaters or isolated waters. NWP 26 required a predischarge notification and evaluation process for proposed actions that would impact from one to ten acres. The purpose of the rule change, the Corps belatedly tried to explain to farmers, was simply to bypass the predischarge notification and move applicants straight into the individual permit review process because experience had shown that most proposed actions in the fifty-one western Minnesota counties did not meet the regional conditions attached to NWP 26 anyway. “The intent was to streamline the administrative burden posed by the predischarge notification process,” one official in the Corps later insisted. These subtleties were lost on the region’s farmers, however, who saw the suspension of NWP 26 as a ploy to tighten restrictions on use of lands bordering prairie potholes.<sup>65</sup>

The reaction from the farm community surprised Corps’ officials. “Many of the comments received in response to the public notice for the proposed exercise of discretionary authority over the prairie pothole region reflected widespread confusion and misunderstanding of the Corps’ regulatory program, especially as it applied to agricultural drainage projects,” one official noted. “In addition, the public was virtually unaware of the regional conditions that apply to the nationwide permit for discharges of dredged or fill material into waters located above the headwaters



**Prairie Pothole Region: Map of 51 counties in western and southern Minnesota that the Corps ruled ineligible for Nationwide Permit 26 because of sensitive prairie pothole wetlands. (Map courtesy of St. Paul District, Corps of Engineers)**

of a stream or into isolated waters.” The regional conditions had been introduced several years earlier to comply with environmental standards developed by state agencies. In an effort to increase public understanding of Section 404 requirements, the Corps held five public meetings in the prairie pothole region of Minnesota in February 1989. District Engineer Colonel Roger Baldwin also withdrew the proposed rulemaking that same month.<sup>66</sup>

The controversies surrounding agricultural drainage ditches and NWP 26 prompted a congressional hearing in St. Cloud, Minnesota, in April 1989. In preparation for the hearing, Wopat prepared testimony for Principal Deputy Assistant Secretary of the Army (Civil Works) John S. Doyle, Jr. The Corps hoped to get clarification from Congress on the Section 404(f) exemption for farming activity. Congressman Arlan Stangeland (R-Minnesota), whose district included St. Cloud in Stearns County, conducted the hearing. At the conclusion of the hearing, the congressional subcommittee went by helicopter to inspect Stearns County Ditch 29, a project the Corps

determined could not be permitted. The congressional hearing in St. Cloud raised interest in the murky problems surrounding the Section 404(f) exemption for farming use, but Corp' officials were disappointed that it did not result in amendatory legislation.<sup>67</sup> Later, Stearns County went forward with Ditch 29, challenging the Corps' Section 404 authority. The Corps sued Stearns County, hoping a court ruling would provide judicial guidance on whether ditch maintenance came under the Section 404(f) exemption. However, the Department of Justice settled the case out of court, so this, too, did not provide the desired clarification.<sup>68</sup>

Having failed to obtain clarification of the farming exemption from Congress or the courts, the Corps and the Environmental Protection Agency found they had no choice but to adopt a more accommodating position on the issue. The two agencies issued a joint memorandum on May 4, 1990. Signed by Assistant Secretary of the Army for Civil Works Robert W. Page and Environmental Protection Agency Assistant Administrator Walter LaJuana S. Wilcher, the statement read: "The exemptions ... recognize that American agriculture fulfills the vitally important public need for supplying abundant and affordable food and fiber, and it is our intent to assure that the exemptions are appropriately implemented." The memorandum launched a broad effort on the part of the Corps and the Environmental Protection Agency to rebuild trust with the farm community on issues involving wetlands.<sup>69</sup> In September 1990, Major General Patrick J. Kelly, Director of Civil Works, issued a guidance letter to all Corps' districts aimed at further placating farmers. Kelly's statement held that "prior converted croplands" would not require Section 404 permits. In general, this applied to wetland that had been manipulated for agricultural production before December 23, 1985 – prior to Swampbuster. "This guidance," the statement continued, "will allow the Corps to focus its limited regulatory resources on the nation's truly important and significant aquatic resources."<sup>70</sup>

### **Cranberry Farms and Mitigation Banks**

Cranberry farmers in Wisconsin raised another issue connected with wetland conversion. The Corps supported a conservation approach called "mitigation banking." A mitigation bank was any private land area where wetlands were saved, restored or created and "sold" as credits to balance the loss of equivalent wetlands acreages elsewhere. When the cranberry industry began to expand sharply in Wisconsin in the 1980s, the Corps took a permissive view of wetland conversion to cranberry farms. The reason for the Corps' leniency was that cranberry farms arguably enhanced the value of existing wetlands, much like mitigation banks. The controversy over cranberry farms paralleled a wider debate over mitigation banks.

Cranberry farmers situated their cranberry beds in acidic, sandy soils. During the growing season, cranberry farmers tried to keep the water table between nine and twelve inches below the surface elevation of the beds. Construction of reservoirs was typically integral to the operation, as large quantities of water had to be delivered to the beds to keep them saturated. The reservoirs

created a more stable hydrology. “In many cases,” Tom Lochner, executive director of the Wisconsin Cranberry Growers Association remarked, “we end up with a higher quality wetlands system that attracts a tremendous diversity of wildlife.”<sup>71</sup>

Corps’ officials supported the industry position. “The cranberry growers are obviously attuned to a number of environmental concerns,” District Engineer Colonel Roger Baldwin stated during a tour of cranberry fields by members of Congress in 1989. Their growing practices, Baldwin said, demonstrated “tremendous environmental awareness.” Cranberry growers needed vast amounts of water in the surrounding area in order to maintain a high water table. For every acre that they put into cranberry beds, growers set aside about thirteen acres of woodland, fields and wetlands for the purpose of recharging groundwater and controlling storm water runoff. These surrounding lands also provided habitat for wildlife and plants.<sup>72</sup>

Environmentalists were not so sanguine. They noted cranberry operations involved stripping and leveling the land put into cultivation. Moreover, use of pesticides and fertilizers on cranberry beds impacted water quality in surrounding areas. Environmentalists wanted cranberry growers to expand into uplands, not wetlands – an alternative that growers claimed to be prohibitively expensive.<sup>73</sup>

In the early 1990s, the St. Paul District took steps to counter environmentalists’ concerns about the Wisconsin cranberry industry. First, it developed a general permit for expansion of existing cranberry operations where the total acreage of disturbance would not exceed ten acres of wetlands. The permit included construction of new cranberry beds adjacent to existing beds, as well as construction or extension of dikes for reservoir expansion. The ten-acre limit would be measured over a five-year period. The Corps noted that with approximately a hundred and fifty cranberry farms in existence, the loss of wetlands over a five-year period would be no greater than 1,500 acres – far less than what critics of the cranberry industry supposed. Moreover, mitigation measures (such as mitigation banking) would offset the losses. The Corps wanted the general permit so that growers would not have to obtain individual permits and the Corps would be able to divert resources away from these controversial actions to permitting actions that were, in the Corps’ view, more important.<sup>74</sup>

At the same time, the St. Paul District conducted a comprehensive study of cranberry operations in Wisconsin authorized under Section 404 of the Clean Water Act. The point of the study was to rebut a Wisconsin DNR study, which found that cranberry operations were responsible for more than half of wetland losses in the state between 1981 and 1989. Whereas the state’s study indicated a loss of 9,247 acres, the Corps’ study showed a loss of 2,737 acres. Whereas the state’s study considered cranberry beds as a loss, the Corps classified cranberry beds as modified wetlands with diminished function and values. In Ben Wopat’s view, the state’s study was motivated by the Department of Natural Resource’s desire to obtain regulatory control of the industry,

which it could only accomplish by the repeal of a troublesome state statute of 1867. That statute exempted cranberry growers from permit requirements for damming, ditching and other activities that were normally regulated under Wisconsin laws. The Corps, for its part, sought to justify its approach to Section 404 permitting, with its emphasis on mitigation over prevention. The Corps' study began with a more inclusive definition of wetlands, and it took a much different view of the mitigation process and results.<sup>75</sup>

The Corps was strengthened in its position by the course of debate over mitigation banks. When the concept was first developed in the 1980s, critics argued that natural and man-made wetlands did not necessarily contain equivalent biological richness; therefore, acre-for-acre compensation did not protect environmental quality. Michael Bowen, a doctoral student in ecology and Corps' scientist himself, argued that mitigation banking was no panacea for wetlands protection when it merely reduced wetlands to equivalent acres. Even when the equivalent acres of wetland habitat were located nearby the project site, there was no certainty that animal populations would move from one place to the other, or that the newly created wetland would be occupied by wetland species. "All we will build," Bowen wrote, "are large, wet, 'dead' areas containing fewer species than the original 'protected' wetland."<sup>76</sup>

The Minnesota and Wisconsin DNRs also doubted the efficacy of mitigation banking in the 1980s. Without state support, the St. Paul District could make little use of mitigation banking, as mitigation credits were not at the disposal of developers in these two states. Unfortunately, the alternative – requiring the developer or landowner to mitigate wetland impacts on the site where the development activity was to occur – was generally more costly and less effective. As the Environmental Protection Agency's Robert H. Wayland III testified before a congressional subcommittee, mitigation banks were "an innovative, market-based way for landowners to effectively and efficiently compensate for unavoidable wetland impacts ... Through mitigation banking, the responsibility for providing mitigation is transferred to an entity that has the financial resources, scientific expertise, and incentives necessary to ensure that the mitigation will be ecologically successful."<sup>77</sup>

In the 1990s, improved techniques in wetland development led to greater support for mitigation banking. Minnesota and Wisconsin both sanctioned the approach. The Clinton Administration made efforts to increase scientific and technical knowledge that would enhance mitigation capabilities. The new administration's announced policy on wetlands, "Protecting America's Wetlands," released in August 1993, contained a strong endorsement of the approach: "Mitigation banking provides for the restoration or creation of wetland functions in advance of development impacts reducing thereby the uncertainty of mitigation success. As such, mitigation banking may expedite the permit review process for projects that qualify. By consolidating compensation requirements, there may be ecological advantages accrued, as well as economies of scale relating to planning, monitoring, and management."<sup>78</sup>

In November 1995, the Corps and other federal agencies provided guidance to promote the establishment and use of mitigation banks under Section 404. The new mitigation banking policy provided for proper location and design of mitigation banks. It required that bank sponsors meet certain standards of financial security and long-term commitment to monitoring and management of the wetlands. By 1997, some two hundred mitigation banks had been approved or were under development nationwide.<sup>79</sup>

### **Statewide General Permits**

As noted above, one important and long-standing goal of the Corps' Section 404 program was to assist the states in assuming greater responsibility for wetlands protection. Coordination of Section 404 regulations with state programs was important for two reasons: first, to facilitate state control; and second, to avoid duplication of effort by the government that resulted in overly burdensome requirements for the public. The Corps was under constant pressure by Congress to streamline its Section 404 permitting process, and coordination with state programs was one area in which the Corps could significantly improve efficiency without sacrificing the Section 404 program's effectiveness. Since Minnesota and Wisconsin both had relatively strong environmental laws, the St. Paul District was often a leader among Corps' districts in coordinating the Corps' regulatory program with state programs.

In 1991, the Minnesota Legislature passed the Wetland Conservation Act, one of the most comprehensive wetland laws in the nation. The law expressed a goal of no-net-loss of wetlands and described a "sequencing" process similar to the Corps' Section 404 program for mitigating impacts. According to the law, anyone proposing to drain or fill a wetland was required first to try avoiding the wetland; second, to try to minimize the impact; and, as a final resort, to replace any lost wetland acres, functions, and values. The law was to take effect in stages, becoming fully operational in 1994.<sup>80</sup>

In 1995, the St. Paul District issued a new programmatic general permit, GP-17, on a trial basis. This permit covered certain activities regulated and approved under the Minnesota law. The state law exempted some activities and types of wetland covered by Section 404, so the programmatic general permit was not a "perfect overlay," but it avoided duplication in most cases. This permit was later incorporated into the Corps' existing programmatic general permit for Minnesota, GP-01-MN.<sup>81</sup>

The St. Paul District made refinements to a similar programmatic general permit for Wisconsin. Although Wisconsin had no state law comparable to Minnesota's Wetland Conservation Act, the Wisconsin Department of Natural Resources vigorously exercised its role in the Section 404 process through the state's Section 401 certification authority. Consequently, the public was urged to apply for the programmatic general permit in Wisconsin, GP-01-WI, through a joint application form addressed to both the Corps and the Wisconsin DNR. As in Minnesota, appli-

cants were advised to submit the application to the DNR, which then forwarded the application, along with its recommendation, to the Corps.<sup>82</sup>

In 2000, the St. Paul District issued three packages of general permits for Minnesota, Wisconsin and Indian reservations. Each package covered a variety of actions previously addressed by the Corps' nationwide permits. A significant innovation in these permits was that each permit had to be accompanied by a "letter of permission" from the appropriate local governing authority. Governing authorities varied and might involve city or county governments, watershed management organizations, soil and water conservation districts, townships or Indian tribal governments. As such, the new permits were designated GP/LOP-MN (for Minnesota), GP/LOP-WI (for Wisconsin) and GP/LOP-IR (for Indian reservations).

The St. Paul District developed an extensive training program to implement the GP/LOP process. The district provided training to tribal environmental staff, as well as various other local government bodies. The Minnesota Wetland Conservation Act empowered more than four hundred local government units to implement the permitting system, few of which commanded any expertise in wetland protection. Most of the people assigned to administer the state program at the local level, Ben Wopat remarked, "could see standing water and cattails and not call it a wetland." The Corps' training sessions were normally one week in length and included classroom training as well as field training.<sup>83</sup>

With the implementation of the GP/LOPs, the St. Paul District no longer dealt with nationwide permits, including the controversial NWP 26. By the late 1990s, the nationwide permits engendered so much scrutiny and protest by state natural resource officials and environmental groups in Minnesota and Wisconsin that they had become more hindrance than help. By abandoning use of the nationwide permits, the St. Paul District tailored its program more closely to the strong state wetland protection programs finally in place in Minnesota and Wisconsin. Still, both states stopped short of assuming control of the Section 404 program itself (as provided for under the Clean Water Act amendments of 1977), preferring to have the continued partnership with the Corps.<sup>84</sup>

### **The Crandon Mine Controversy**

No environmental controversy tested the St. Paul District's ability to exercise its regulatory function more publicly than the complicated proposal to develop the Crandon Mine. Located a few miles south of the town of Crandon in Forest County, northern Wisconsin, the proposed mine would have accessed a rich deposit of zinc and copper ore that was claimed to be one of the ten largest ore bodies of its type in North America. Discovered in 1976, the ore body stirred enormous economic interest and political opposition. Because any major mining operation would have involved the discharge of fill material into jurisdictional wetlands, the Corps was involved through the Section 404 process. The controversy over the potential development of the Crandon

Mine involved the Corps with the ore body owners, the Wisconsin DNR and three separate Wisconsin Indian tribes. Other parties in the controversy included the governor, the Environmental Protection Agency, the U.S. Fish and Wildlife Service and local and national environmental groups. At the center of the controversy were the evolving plans and environmental impact statements concerning how the mine would be developed. “Crandon Mine is the granddaddy of all EISs,” Ben Wopat remarked. “It’s a world-class EIS.”<sup>85</sup>

Exxon Coal and Minerals Company began mineral exploration in northern Wisconsin in 1969 and announced its discovery of the deposit south of Crandon in 1976. Exxon applied to the Wisconsin DNR and the Corps for the necessary permits to develop a mine in 1982, proposing a \$540 million project that would involve daily production of about ten thousand tons of zinc and copper ore. While the DNR and the Corps reviewed the proposal, metal prices fell and Exxon withdrew its applications in 1986. Seven years later, Exxon formed a partnership with a Toronto-based company and created a subsidiary, Crandon Mining Company. The following year, in 1994, the new company again applied for permits to open the Crandon Mine, proposing to extract 55 million tons of ore at a rate of 5,500 tons per day. Although the scale of operations was reduced in the new proposal, environmental regulations had become more restrictive. No fewer than twenty permits were involved, including a Section 404 permit for discharge of fill material in wetlands.<sup>86</sup>

A further modification of the Crandon Mining Company proposal in 1995 involved the Corps in another key issue. The proposed project was located in an area of extensive wetlands – the headwaters, in fact, of four separate watercourses: the Wolf, Brule, Peshtigo and Pine rivers. The waters of Forest County include some five hundred miles of trout streams and a hundred and ninety named lakes. Mining engineers determined the mine operation would require discharge of an average of 42 thousand gallons an hour of treated wastewater, much of it from groundwater seepage into the mine. In the modified proposal, the wastewater would flow through a thirty-eight-mile pipeline, entering the Wisconsin River south of the town of Rhinelander in Oneida County. Previously, the proposal was to discharge the wastewater into the Wolf River. Since the surface waters in Forest County drain into Lake Michigan, while the Wisconsin River flows into the Mississippi River, the question arose whether this plan would have involved a diversion of water out of the Great Lakes Basin.<sup>87</sup>

The proposed decision had legal and political significance because the Water Resources Development Act of 1986 prohibited any new diversion of Great Lakes water for use outside the Great Lakes Basin without approval by the governor of each of the Great Lakes states. The Wisconsin DNR held that the law only applied to surface waters and did not apply in the case of the Crandon Mine. Michigan’s Governor John Engler disagreed. In a letter to Wisconsin’s Governor Tommy Thompson in February 1998, Governor Engler argued that a draw down of the groundwater in Forest County could effectively tap Great Lakes water; therefore, a transfer of



**Skunk Lake (top), a small lake located just east of the formerly proposed Crandon mine and mill site. The mining company was proposing to pump additional water into the lake to mitigate for the water that would have been lost due to groundwater drawdown. Bur Oak Swamp (directly above) is located near the formerly proposed Tailings Management Area. This wetland was of special concern to the Tribes because it is the home of hybrid white and bur oak trees, which are relatively uncommon. (Photos courtesy of Jon Ahlness, St. Paul District, Corps of Engineers)**

water from Forest County to the Wisconsin River was unacceptable to the state of Michigan.<sup>88</sup>

The issue was resolved when Exxon sold its interest in the mining venture to an Australian-based company, and the new subsidiary, Nicolet Minerals, once again modified the proposal. In its revised proposal, Nicolet Minerals altered the milling process to remove pyrite from the tailings to be deposited on the surface and thereby reduce acid drainage. It also included a plan for the additional treatment of wastewater on site, discharging it into infiltration fields from which it would seep back into the groundwater. Nicolet Minerals revised the proposal in response both to the Michigan governor's challenge and to a new mining law passed by the state of Wisconsin. The Wisconsin state law, tagged the mining moratorium law, introduced stricter standards to protect the environment from acid mine drainage during the life of the mine and after its closure. The changes adopted by Nicolet Minerals ostensibly eliminated the need for pumping wastewater to the Wisconsin River.<sup>90</sup>

Each modification of the mining proposal forced the Corps and the Wisconsin DNR to begin practically anew on environmental impact studies. Documentation submitted by the succession of mining concerns grew upwards of seventy thousand pages. The Corps was under strong pressure to find efficiencies in this lengthy and expensive process, such as combining efforts with the Wisconsin DNR, but it also faced demands from Indian tribes to give consideration to federal trust responsibilities that were outside the DNR's scope. Legal counsel for the tribes argued that the Corps, representing the federal government, had fiduciary responsibilities to protect Indian trust resources both on and off the Indian reservations near the mine site. Moreover, legal counsel for the tribes contended that the Corps was not fulfilling the Clinton Administration's stated policy of implementing government-to-government relations with tribes. In response to these charges, the St. Paul District developed an issue paper about the Corps' trust responsibilities toward Indian tribes in the regulatory permitting process. In 1999, the tribes responded with their own issue paper, insisting that the Corps' commitment did not go far enough.<sup>91</sup> The St. Paul District determined that the trust relationship between the federal government and the tribes required it prepare an independent EIS – although it would continue to share data with the DNRs and other federal agencies. To assist in developing the EIS, the Corps contracted with an environmental engineering firm, Montgomery Watson Harza.<sup>92</sup>

As the mining proposal crept toward seeming finality, the Mole Lake Band moved to center stage among mine opponents. It established stringent water quality standards on the reservation two miles downstream from the mine site, requiring that the water entering the reservation be as pristine as though there were no mine. The Wisconsin Department of Natural Resources sued, contending the Environmental Protection Agency exceeded its authority in approving the water quality standards of the tribe. The court ruled in favor of the Environmental Protection Agency and the tribe. The DNR appealed the decision, and the Seventh U.S. Circuit Court of Appeals again found in favor of the Environmental Protection Agency and the tribe. The DNR took the

case to the U.S. Supreme Court, which upheld the lower court's decision in June 2002. In response to the high court's ruling, Nicolet Minerals president Dale Alberts stated that the company could comply with the tribe's "nondegradation standard."<sup>93</sup> Later that summer, a delegation of the Mole Lake Band traveled to Johannesburg, South Africa, to talk with members of the board of Nicolet Minerals' parent corporation in an effort to get the company to sell the property to the state.<sup>94</sup>

With the company claiming it would have all necessary permits in hand by the first quarter of 2004, negotiations got underway to purchase the mine property and finally lay the controversy to rest. A coalition of environmental organizations and local and tribal governments advanced a proposal for state acquisition of the property. The proposal would turn the site into a "conservation area dedicated to sustainable land management practices, tribal cultural values, and tourism suitable to this environmentally sensitive area."<sup>95</sup> When this initiative fizzled, the Forest County Potawatomi and Mole Lake Band negotiated their own buyout of the mining interests. On October 28, 2003, the two Indian tribes purchased the property for \$16.5 million. The tribes withdrew all permit requests, ending more than two decades of controversy.<sup>96</sup>

## **Conclusion**

Since 1975, the heart of the St. Paul District's regulatory mission has been the protection of wetlands. This resource is exceptionally significant in the St. Paul District – owing both to its extensiveness and its vulnerability to agriculture. The district pioneered a major innovation in the Section 404 program when it revised regulatory boundaries to conform to state lines and focused on cooperation with state wetlands protection programs in Minnesota and Wisconsin. Through astute political decision-making, the district obtained the respect and cooperation of urban dwellers, as well as farmers, environmentalists and developers. However, as the Crandon Mine controversy demonstrated, it continued to face challenges in preventing the degradation of this vulnerable resource.

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