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Allan Jenkins

*University of Nebraska at Kearney*

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## **THE PLATTE RIVER COOPERATIVE AGREEMENT: A BASINWIDE APPROACH TO ENDANGERED SPECIES ISSUES**

**Allan Jenkins**

*Economics Department  
University of Nebraska at Kearney  
Kearney, Nebraska 68449-1206*

**ABSTRACT**—This paper reviews current endangered species issues associated with the development of the Platte River and the “Cooperative Agreement for Platte River Research and Other Efforts Relating to Endangered Species Habitats.” The Platte River is an important economic resource, providing water essential for irrigation in a highly productive, but semiarid, agricultural region. However, the Middle Platte region of southcentral Nebraska is also recognized as a critical environmental zone for several endangered species. Thus, Platte River water users are subject to the provisions of the Endangered Species Act. In 1994, the Governors of Nebraska, Colorado and Wyoming agreed to work cooperatively with the US Department of Interior on resolving economic and environmental issues relating to the Platte River. After three years of negotiations, the three states and the Department signed a Cooperative Agreement that details a 75 million-dollar, 10-to-15 year plan for basinwide recovery efforts. While it is premature to judge the ultimate effectiveness of the Cooperative Agreement, understanding its central features provides important insights into some of the environmental issues critical to the Great Plains.

### **Introduction**

Management of the Platte River is now influenced by the requirements of the Endangered Species Act of 1973. In this paper, I summarize the current endangered species issues related to the Platte River and review the development and intent of a plan to address these issues through a basinwide approach. The “Cooperative Agreement for Platte River Research and Other Efforts Relating to Endangered Species Habitats” is a unique partnership between the US Department of Interior and the States of Nebraska, Colorado, and Wyoming. The three governors and the Secretary of Interior signed the agreement on 1 July 1997. The catalyst for the Cooperative Agreement was the difficulty encountered by power and irrigation projects operating on

the Platte River as they attempted to meet the requirements of the Endangered Species Act as a necessary condition to receive new operating licenses.

The Cooperative Agreement represents the "New Federalism" approach to regulation, an approach which relies less on nation-wide standards and more upon localized policies that are better suited to unique local circumstances (Vig and Kraft 1990). While the Federal government is typically perceived as the primary actor in environmental protection, state governments are active participants in environmental policy, and they are often the source of innovation (Ringquist 1993; Portney 1992). The Cooperative Agreement is an example of such innovation. A key component of the Cooperative Agreement is the creation of a special environmental water account in Lake McConaughy, an idea originally proposed by Governor Benjamin Nelson of Nebraska. Interestingly, the three states involved in the Cooperative Agreement are traditionally identified as having weak environmentally-related institutional capacities and a weak commitment to environmental protection (Vig and Kraft 1990).

The Cooperative Agreement takes a creative approach to meeting the provisions of the Endangered Species Act, which is recognized as one of the world's strictest environmental laws (Miller 1992; Disilvestro 1989). The laws require that the US Fish and Wildlife Service, Department of the Interior, identify non-marine endangered and threatened species and the National Marine Fisheries Service, Department of Commerce, identify endangered and threatened marine species. The decision to add or remove a species from the endangered list is based solely on the relevant scientific data, specifically excluding economic considerations from the listing process (Brown and Shogren 1998). The fundamental goal of the Endangered Species Act, set forth in Section 2(b), is to:

. . . provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the [international conservation] treaties and conventions. . .

Courts have generally held a strict interpretation of the Endangered Species Act, which has made enforcement controversial (Condra 1995; Innes and Tschirhart 1998). The Secretary of Interior controls the regulatory power relating to non-marine species through the Fish and Wildlife Service.

The Endangered Species Act prohibits Federal agencies from funding or carrying out projects that negatively impact listed species or their critical habitat. Section 7 of the Act provides statutory protection for endangered species by mandating that actions of a Federal agency may not jeopardize the continued existence of a listed species. Through the consultation process defined in Section 7, the Fish and Wildlife Service provides a written statement, called a biological opinion, if a proposed Federal action may jeopardize a listed species.

All Federal agencies, even the US Department of Defense, must consult with the Fish and Wildlife Service before beginning a project. If the initial review determines that the proposed action will harm a listed species, the Fish and Wildlife Service recommends “reasonable and prudent” alternatives that are “economically and technologically feasible” to meet the project goals without jeopardizing the endangered species. Critics of the Endangered Species Act complain that the act is too restrictive and stops development (Condra 1995). However, of 98,237 interagency consultations between 1987 and 1992, only 55 projects were actually stopped (Chadwick 1995). While the Endangered Species Act is criticized by some as overly restrictive, it enjoys wide popular support (Davis 1992; Czech and Krausman 1997).

There are nine recognized endangered or threatened species that use the Platte River. Interior Least Terns, *Sterna athalassos*, (endangered) and Piping Plovers, *Charadrius melodus*, (threatened) nest in the Middle Platte region on sandbars historically scoured clear of vegetation by high spring-time flows (Nebraska Public Power District 1997). Approximately 10% of the Interior Least Tern population and 3% of the Northern Great Plains population of Piping Plovers use the Platte River (Nebraska Public Power District 1996). The Middle Platte also provides critical migratory habitat for a variety of species, including two of the highest profile species, the Whooping Crane, (*Grus americana*), and the Bald Eagle, (*Haliaeetus leucocephalus*). In 1997, there were 182 Whooping Cranes in the migratory flock that passes through Nebraska (Platte River Whooping Crane Maintenance Trust 1998). The Bald Eagle was listed as an endangered species until 11 August 1995, when increased numbers allowed its reclassification as a threatened species. Endangered Peregrine Falcons, (*Falco peregrinus*) occasionally migrate through the region. A Fish and Wildlife Service biologist reported the sighting of a single endangered Eskimo Curlew (*Numenius borealis*) near Grand Island in 1987, but the sighting was rejected by the Nebraska Ornithological Union (Courtelyou 1987; Nebraska Ornithologists’

Union Records Committee 1988). In addition to providing critical habitat for high profile *species* like the Whooping Crane, the Middle Platte region also contains populations of the endangered Western Prairie Fringed Orchid (*Habernaria leucophaea* (Nutt.) A. Gray) and the endangered American Burying Beetle (*Nicrophorus americanus* L.) (Fritz 1993; Peyton 1995). The lower Platte River, just upstream from entering the Missouri River, holds a population of the endangered Pallid Sturgeon (*Scaphirhynchus albus*) (Hofpar and Peters 1997).

In sum, to understand the influence of the Endangered Species Act on the management of the Platte River, one must recognize the unique characteristics of the river that make it such a valuable ecological and economic resource.

### **The Platte River: Competing Demands for a Scarce Resource**

The Platte River system runs for 1,352 miles through Colorado, Wyoming, and Nebraska (Fig. 1). From its headwaters in the Colorado Rockies, the Platte system carries approximately 1.16 million acre-feet of water each year through the Central Platte Valley to Grand Island (Boohar and Walczyk 1998). (An acre-foot is the water required to cover one acre with one foot of water, or, 325,851 gallons.) Since the 1880s, municipal and irrigation needs have diverted Platte River flows. Like other rivers flowing through the Great Plains, the Platte River faces increasing demands upon its limited water supply. Prior to the construction of the five major reservoirs in Wyoming—Pathfinder (1909), Guernsey (1927), Alcova (1938), Seminoe (1939), and Glendo (1957)—as well as McConaughy (1941) in Nebraska, the Platte River would often flood in late spring, but go completely dry in late summer during drought years. The river is now a series of braided channels separated by mature stands of riparian forest. The impact of the changes in water flow on endangered species, and whether the Central Platte River ecosystem is continuing to change in ways harmful to listed species, is the subject of an ongoing debate (Williams 1978; Johnson 1994, 1996; Currier 1997; Kwapnioski and Dekleva 1997).

The Platte River flows through territory identified by early American explorers as the Great American Desert (Dick 1975). The 45-56 cm (18-22 in.) yearly precipitation zone is one of nature's great boundaries, marking the beginning of a semiarid region (Langman 1971; Neild 1977). Successful production of high-value crops in areas with less than 56 cm (22 in.) of annual precipitation requires systematic irrigation. Over much of the Central

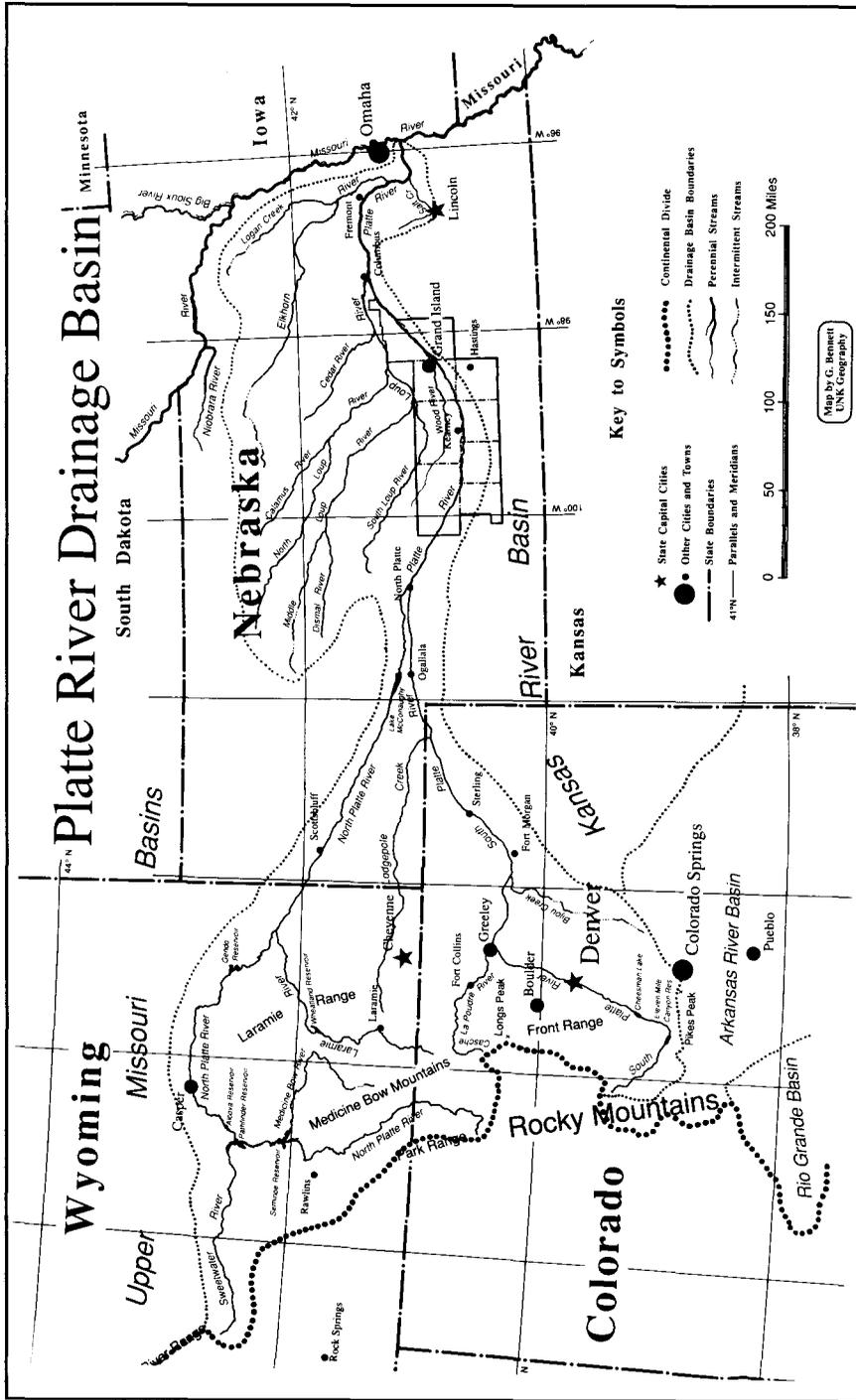


Figure 1. The Platte River Basin. Map courtesy of Gordon Bennett.

Great Plains, this natural boundary roughly parallels the 100th Meridian (Kraenzl 1955; Haggett 1975). The 56 cm (22 in.) line crosses the Platte River in Dawson County in south central Nebraska (Stone 1993). Because there is substantial variation in precipitation from year to year during the growing season, the actual irrigation zone pushes eastward from this line to cover the eastern third of Nebraska (Williams and Murfield 1977). Within the irrigation zone, land that is irrigated will produce approximately one-third more corn than dryland acres during normal-precipitation years. In very dry years, irrigated acres account for nearly all the corn produced in this region. In 1997, a relatively dry year, corn yields in Buffalo County in south central Nebraska averaged 160 bushels per acre on irrigated land and 53 bushels per acre on non-irrigated land (Nebraska Agricultural Statistics 1998).

Currently, there are 195 significant water storage facilities in the Platte River system, capable of holding up to 8,885,000 acre-feet of water (Nebraska Public Power District 1996). The South Platte River is a major municipal water source for the rapidly growing Front Range region of Colorado, including the Denver to Fort Collins development corridor, and it also provides surface irrigation water for 983,000 acres in Colorado and Nebraska (Central Nebraska Public Power and Irrigation District 1995). The North Platte River provides surface irrigation for 721,000 acres and hydro-power for southeastern Wyoming and western Nebraska (Central Nebraska Public Power and Irrigation District 1995). The Central Platte River, from the confluence of the two branches at the city of North Platte to Grand Island, provides surface irrigation for 225,000 acres in south central Nebraska (Central Nebraska Public Power and Irrigation District 1995). With the yield differential between dryland and irrigated cropland described above, the Platte River's direct economic benefit to the agricultural sector is several hundred million dollars each year. A secondary economic benefit stems from the 120,000 kilowatts of low-cost electricity generated by Platte River flows in Nebraska (Nebraska Public Power District 1996).

In addition to these important human uses, the Platte River provides the water for a critical ecological zone. Viewed from space, the North American Central Flyway (Fig. 2) has a vast hourglass shape, with the narrow waist lying along the eighty-mile stretch of the Platte from Grand Island to Lexington, Nebraska. Millions of waterfowl, shorebirds, songbirds and other migratory species rely on this stretch of the river during their annual migration (NEBRASKAland Magazine 1997). Two bird species are particularly linked to the Platte River. Each spring 400,000 to 500,000 Sandhill Cranes

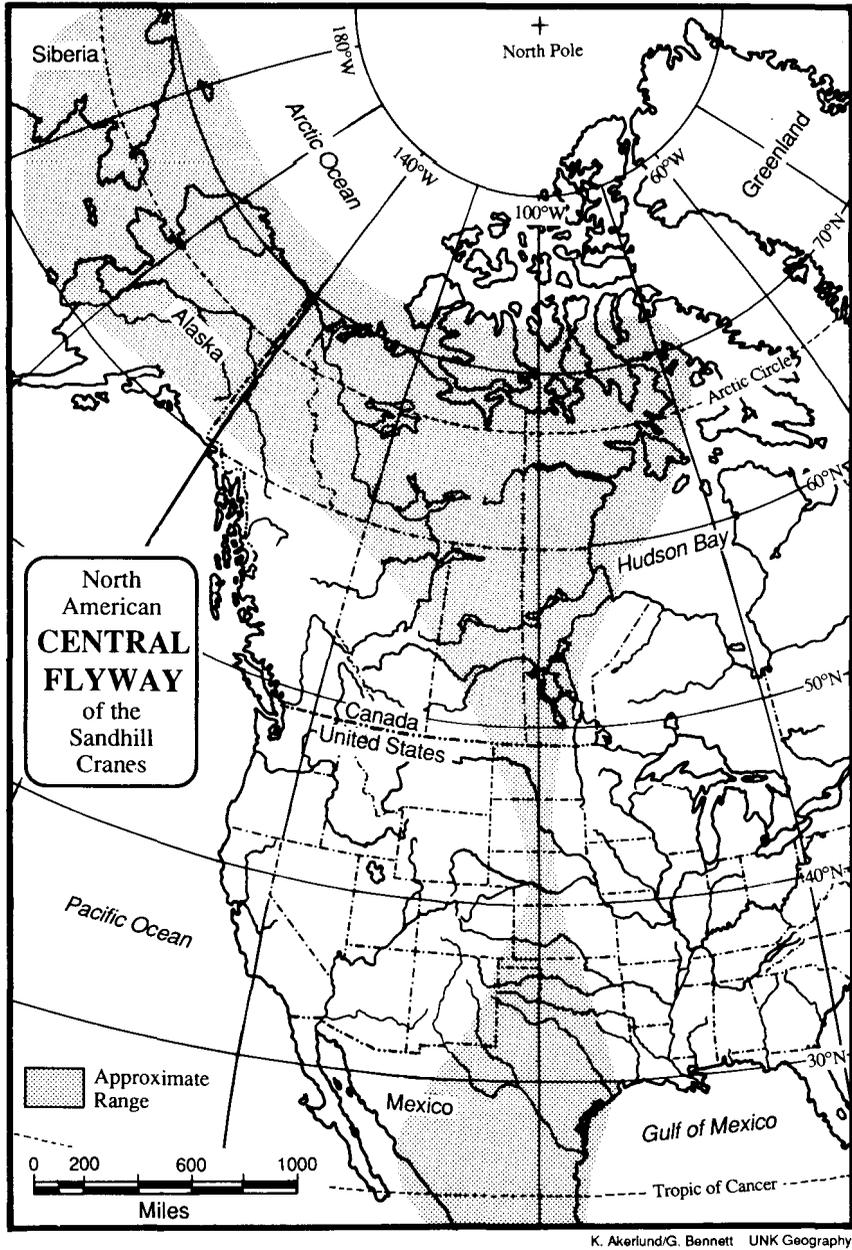


Figure 2. North American Central Flyway. Map courtesy of Gordon Bennett.

(*Grus canadensis*) use the river as a staging area (Springer 1993). The cranes establish pair-bonds, feed in nearby cornfields and wet meadows, and roost in the middle of the shallow river as protection against predators. During their three-week stay on the Platte River, the Sandhill Cranes gain the strength and weight necessary for successful nesting in Canada, Alaska, and Siberia. The endangered Whooping Crane, with a wild population hovering under 200 birds, is also intimately linked to the Platte River. While Whooping Cranes do not stay on the river for extended periods, they generally use the Middle Platte region as a stopover in their annual migration between nesting grounds in Canada's Wood Buffalo National Park and wintering grounds in Aransas National Wildlife Refuge on the Gulf Coast of Texas (US Fish and Wildlife Service 1999).

The springtime staging of Sandhill Cranes along the Platte River has drawn increasing national and international attention since the 1970s (Farrar 1991). The proposed construction of a large water diversion project in south central Nebraska, the Midstate Irrigation Project, brought national attention to the cranes and focused attention on the diminishing stretches of the river available to all migratory birds in the Central Flyway. The ecological uniqueness of the region has attracted both public and private habitat preservation and restoration efforts. The National Audubon Society established the Lillian Annette Rowe Wildlife Sanctuary on the Platte River southwest of Grand Island in 1973. The Nebraska Game and Parks Commission, Nebraska Public Power District, Central Nebraska Public Power and Irrigation District, and the Central Platte Natural Resource District have also funded scientific studies and engaged in habitat improvement efforts in the region.

The proposal for the Midstate Irrigation Project was defeated in 1975 (Farrar 1991). During this same period, the National Wildlife Federation and State of Nebraska filed suit to stop the construction of Grayrocks Dam on Wyoming's Laramie River, a tributary of the North Platte (Platte River Whooping Crane Habitat Maintenance Trust 1996). Both parties bringing the suit were concerned about the impact of the proposed dam on downstream wildlife habitat, water supply, and irrigation. The Grayrocks Dam was eventually built, but only after provisions were made to mitigate its downstream impact. As part of the court-approved settlement in 1978, the Platte River Whooping Crane Habitat Maintenance Trust was created through a 7.5 million-dollar payment by the Missouri Basin Power Project. With proceeds from the settlement, the Crane Trust purchased more than 9,000 acres of land in the central Platte River region and has become actively involved in habitat restoration.

Given the Platte River's location and unique ecological characteristics, it is not surprising that there are a variety of stakeholders with conflicting views concerning management of the river. Agricultural producers want to maintain and expand irrigation opportunities. Municipalities want to maintain and expand water allocations for domestic and industrial use. The electric utilities want to manage reservoir levels and river flows to meet the needs of their hydroelectric plants. Local, national, and international environmental groups want to manage in-stream flows to protect and expand habitat. Multiple layers of government are also involved in Platte River issues. The Federal government, Wyoming, Colorado, and Nebraska State governments, and hundreds of cities, towns, natural resource districts, irrigation districts, and other governmental entities have a direct interest in the Platte.

There is a long history of friction between the states of Nebraska, Colorado, and Wyoming over the allocation of Platte River flows. In 1934, during a period of severe drought, Nebraska initiated a suit against Wyoming (*Nebraska v Wyoming*) seeking a more equitable apportionment of the North Platte's water. The legal action was expanded to include Colorado and the apportionment of the South Platte River. Attorneys representing Nebraska argued that both upstream states were diverting too much water into their irrigation projects. Because of the complexity of the issue, the US Supreme Court did not hand down its decision until 1945. Although Nebraska won the case, the decision did not resolve all the Platte River water issues, and the states have continued to battle over apportionment.

### **The Early Relicensing Experience**

Platte River water users recognized the need for a basinwide approach after witnessing the difficulty two power districts had in obtaining new operating licenses for their hydroelectric plants on the Platte River. Kingsley Dam Hydro, operated by Central Nebraska Public Power and Irrigation District, and the North Platte Hydro, operated by Nebraska Public Power District, were the first projects on the Platte River to seek relicensing after passage of the Endangered Species Act. These power plants were constructed in the 1930s as part of the Works Progress Administration, and they were originally granted fifty-year operating licenses. At the time of construction, there was little concern about endangered species. However, when the districts attempted to renew their operating licenses in the 1980s through the Federal Energy Regulatory Commission, they had to address the possible

impact of their facilities on endangered species. The relicensing effort, initiated in 1984, proved difficult and expensive. The Federal Energy Regulatory Commission rejected the initial applications on the basis of inadequate provisions for mitigating the local impact on listed species. This decision forced the power districts to take direct action to improve conditions for endangered species. After fourteen years of negotiations and effort, the new forty-year operating licenses were finally granted on 29 July 1998 (Nebraska Public Power District 1998). According to Jay Maher, Relicensing Coordinator for Central Nebraska Public Power and Irrigation District, during this period the two power districts spent nearly \$35 million dollars on legal fees, ecological studies, and habitat improvement for endangered species (Maher 1998).

The experience of Nebraska Public Power District in its attempt to increase nesting habitat for endangered Interior Least Terns and threatened Piping Plovers illustrates some of the difficulty in meeting the Endangered Species Act requirements through individual actions. As part of the hydroplant relicensing effort, the Federal Energy Regulatory Commission issued an order on 14 February 1990 requiring the Nebraska Public Power District to develop eight islands in the Middle Platte region to provide nesting habitat for the endangered Interior Least Tern and the threatened Piping Plover (Nebraska Public Power District 1995). The specified action was designed to mitigate the recognized impact of hydroelectric and irrigation projects that use Platte River water. Nesting habitat for the target species decreased because human activity had altered the Platte River ecosystem. Prior to the building of power and irrigation projects, Platte River flows increased dramatically in the spring as snowpack melted in the Rocky Mountains. High water scoured the banks and sandbars of woody vegetation, creating the bare sand islands that provided the preferred nesting habitat of both terns and plovers. The more uniform flows of the regulated river have allowed woody vegetation to survive on the banks and islands. Lacking a sufficient number of naturally occurring bare islands, the Federal Energy Regulatory Commission required the creation of artificial islands.

The Nebraska Public Power District spent \$396,000 by 1994 to develop and maintain the first three of the required islands (Nebraska Public Power District 1995). Unfortunately, the early return on this investment was minimal. During the first three nesting periods, five Interior Least Tern chicks and one Piping Plover chick successfully fledged from nests on the three islands. The long-term viability of the islands is now in doubt because

they suffered significant erosion during the higher-than-average flows of the Platte River in the spring and summer of 1995.

From this experience, the Nebraska Public Power District was able to convince the Federal Energy Regulatory Commission that artificial islands were unsuitable for expanding tern and plover nesting habitat. Instead of building five more islands, Nebraska Public Power District began to develop and manage five sandpits adjacent to the river as tern and plover habitat. During the seven nesting seasons from 1991-1997, 212 Interior Least Terns and 78 Piping Plovers fledged from the sandpits, while the islands produced only 50 tern and 13 plover fledglings (Nebraska Public Power District 1997). Even though the sandpits have increased the number of fledglings, the cost per bird produced is still high. Overall, trying to meet the species' needs through isolated actions, like the creation of the artificial islands, has proved expensive and it has been minimally effective.

### **The Basinwide Recovery Program**

The prospect of fighting a similar battle on relicensing each of the hundreds of facilities on the Platte River in Nebraska, Wyoming and Colorado was viewed with great concern. In response, in 1994, US Secretary of the Interior Bruce Babbitt proposed a basin-wide approach to endangered species issues on the Platte River. This proposal reflected the Department of Interior's recognition of an increasingly important role for partnerships in meeting Endangered Species Act requirements (Clark and Brunner 1996). The initial action was the drafting and signing of a "Memorandum of Agreement" between the three states and the Department of Interior in 1994. The purpose of the memorandum was to:

. . . initiate the development of a mutually acceptable Platte River Basin Endangered Species Recovery Implementation Program that would help conserve and recover federally listed species associated with the Platte River Basin in Nebraska upstream of the confluence with the Loup River; help protect designated critical habitat for such species; and help prevent the need to list more basin associated species pursuant to the Endangered Species Act.

In essence, through this agreement the Governors of the three states agreed to work cooperatively on the development of a Basinwide Recovery Program for the four threatened and endangered species most closely tied to

the Platte River –Whooping Crane, Piping Plover, Interior Least Tern, and Pallid Sturgeon. The end result of the Memorandum of Agreement is the creation of a basinwide plan for review under the National Environmental Policy Act. The basinwide plan, designated the “Cooperative Agreement,” is designed to provide “regulatory certainty” for new and existing water projects on the Platte River. The Cooperative Agreement will act as an environmental assessment umbrella, allowing individual water-using projects on the river to operate without going through a separate lengthy environmental impact assessment that would otherwise be required by the National Environmental Policy Act (Lingle and Franti 1998).

After three years of negotiation, the three governors and Secretary Babbitt signed the Cooperative Agreement on 1 July 1997. The Cooperative Agreement describes the actions that will be undertaken while the overall plan is reviewed under the National Environmental Policy Act—a process expected to take three to four years (Table 1). The agreement also describes actions proposed for the program’s first increment, expected to last 10 -13 years after the National Environmental Policy Act review.

Recognizing that a wide variety of groups have an interest in management decisions, the Cooperative Agreement creates an administrative structure that includes representatives from multiple stakeholder groups. The governance committee includes one representative from: North Platte water users, South Platte water users, Middle Platte water users, Fish and Wildlife Service, Bureau of Reclamation, State of Wyoming, State of Colorado, and State of Nebraska. Environmental groups were granted three positions on the governance committee, but only given two votes. The initial environmental representatives were: the Audubon Society of Nebraska, the Environmental Defense fund of Colorado, and the Platte River Whooping Crane Maintenance Trust. To assist the governance committee, the agreement also created a land committee, a water committee, and a technical committee.

The central element of the proposed basinwide plan is the creation of an “adaptive management” strategy that will coordinate, monitor, and refine management practices over the initial increment’s 10-13 year period. Adaptive management, a concept first developed in the mid-1970s by ecologists working with C.S. Holling, is based upon the recognition that uncertainty and change are always characteristics of dynamic ecosystems (Carpenter 1997). Under the adaptive management approach, the study area is continually monitored and management practices are adjusted as the ecosystem changes or as new scientific findings become available. Adaptive management, rather than a strict command and control regulatory approach, was

TABLE 1

The Cooperative Agreement Activities Initial 3 to 4 Years	
..	Create a Governance Structure that ensures appropriate state government and stakeholder involvement
..	Develop Environmental Impact Statement to submit for National Environmental Protection Act review
..	Monitor new water-related activities
..	Offset new depletions
..	Complete water conservation and water supply study
..	Begin operation of the Environmental Account of water stored in Lake McConaughy
..	Begin management of Cottonwood Ranch near Overton for endangered species habitat
First Program Increment 10 to 13 Years	
..	Increase storage capacity at Wyoming's Pathfinder Reservoir (Three-Brick Project)
..	Initiate Tamarack water storage project in northeastern Colorado
..	Provide 10,000 acres of habitat land between Lexington and Chapman (includes Cottonwood Ranch)
..	Reduce shortages to the target flows by 130,000 to 150,000 acre-feet per year as measured at Grand Island through water conservation/supply projects

selected for the Cooperative Agreement because there are still important biological issues that are not yet resolved. For example, the Fish and Wildlife Service specified target flows to meet the habitat needs of the currently listed endangered species. The original target flows indicated a shortfall of 400,000 acre-feet of water per year of the amount necessary to maintain habitat in the Middle Platte. However, not all biologists agreed with the Fish and Wildlife

Service target flows (Nebraska Public Power District 1996). Following the adaptive management strategy, the target flows will be adjusted as new studies refine the habitat/flow requirements.

An important long-term goal of the basinwide plan, once the ultimate target flows are determined, is the provision of increased flows to meet the targets. To begin this process, three actions will begin immediately. First, an "environmental account" of up to 200,000 acre-feet of water is being set aside in Lake McConaughy. A Fish and Wildlife Service account manager controls the release of this water to directly protect the habitat requirements of the listed species. An additional 34,000 acre-feet of water will be made available to the environmental account by increasing the capacity of Pathfinder Reservoir in Wyoming. Colorado's contribution is the construction of the Tamarack Project in the northeast corner of the state, which will remove water from the South Platte during times of high flows and return it to the river through groundwater recharge during dry periods. The short-term goal is to reduce the identified shortages by 130,000 to 150,000 acre-feet of water during the first phase of the program.

In addition to increasing the flow of water, the basinwide plan is also designed to expand available river and riparian habitat. The ultimate program goal is to protect and develop 29,000 acres in ten habitat complexes in the Middle Platte region between Lexington and Chapman. The goal of the first increment is to protect and develop the initial 10,000 acres. The states and the Department of Interior have agreed that they will not use the power of eminent domain—all habitat land will come from willing owners through sale, lease, or conservation easements.

The Cooperative Agreement will also attempt to assess the local social, political, and economic impacts created by the basinwide plan. For example, a "third party" impact study is planned to examine issues stemming from the conversion of farmland to endangered species habitat. The study will examine local economic consequences resulting from the subsequent decrease in agricultural inputs and output, tax effects on local governments dependent upon property taxes, changes in land use, and impacts on nature-based tourism and hunting opportunities.

### **Program Costs**

The total costs during the National Environmental Protection Act review period and the initial 10-13 year increment of the Basinwide Recovery Program are estimated at 75 million dollars. The Federal government will

provide half of this amount, the states will split the remainder. Nebraska and Colorado will each contribute 40% of the states' costs, while Wyoming will contribute 20%. (Lingle and Franti 1998). State efforts to conserve water, acquire habitat, and restore habitat count as part of their contribution. Thus, in the first increment, Nebraska will contribute \$700,000 in cash, the water in the Lake McConaughy environmental account (valued at \$9 million), and several habitat acquisition and restoration efforts in the Middle Platte region (Department of Interior 1997). Wyoming will contribute \$4,000,000 and the additional water from Pathfinder Reservoir. Colorado will contribute \$10,800,000 in cash and will begin construction of the Tamarack project.

While the state contributions represent a considerable expenditure, the total cost of the basinwide approach is expected to be much lower than the cost of handling endangered species issues on an individual project basis. This provides a powerful incentive for the three states to cooperate. The states are not legally bound to continue to participate, and each can drop out of the Cooperative Agreement at any time. At the present time, each state recognizes the advantages of cooperation to share information and defray costs.

### **Conclusion**

Assuming the National Environmental Policy Act assessment of the basinwide plan is generally positive, the Platte River Cooperative Agreement will attempt to meet the initial water and land components of the recovery plan over the next 15 years. Once the first increment is underway, progress will be evaluated, necessary program adaptations will take place, and the planning for a second increment will begin. As the recovery plan continues, it is unlikely that annual expenditures will remain at the first increment level. Some of the proposed actions are one-time events. For example, increasing the capacity of Pathfinder Reservoir requires major expenditure only one time. Barring fundamental changes in the Endangered Species Act or an unexpected change in the listed species, the program will continue indefinitely. Obviously, if the Whooping Crane, Pallid Sturgeon, Interior Least Tern or Piping Plover become extinct, the Cooperative Agreement would be altered to reflect the new reality. If all of the listed species recover to the point where they are no longer considered endangered or threatened, the project could be terminated. Realistically, it is not likely that all four species will prosper sufficiently to alter their endangered or threatened status in the foreseeable future. Thus, long-term monitoring of flows

and habitat conditions, as well as assessment of overall program impact, should continue.

Management of the Platte River is inherently complex—biologically and politically. Protecting the river's unique qualities presents a daunting task. If the diverse stakeholders on the governance committee can maintain a working relationship; if the biological connections between flows, habitat, and species can be identified; if adequate funding is forthcoming; and if the public continues to support the preservation of endangered species, the Cooperative Agreement will have a far reaching impact upon the Platte and all who use it.

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