

Chapter 2: The Planning Process

This Comprehensive Conservation Plan (CCP) and associated EA were prepared in compliance with the National Wildlife Refuge System Improvement Act of 1997, the National Environmental Policy Act of 1969, and Service policy set forth in the Departmental Manual on National Wildlife Refuge System Planning (part 602 FW 1).

The planning area used for this CCP spanned the Illinois River Corridor from roughly Hennipen, Illinois, downstream to Meredosia, Illinois. Management direction was developed for land within the authorized boundaries of the refuges within the Illinois River National Wildlife and Fish Refuge Complex and associated land within the Illinois River Corridor.

2.1 Meetings and Other Forums

This planning project was launched with public meetings aimed at giving neighbors, the community, state and local government, and state and federal agencies an opportunity to describe the issues they believe should be addressed in long-term planning. Public meetings were held between April 19-21, 1999, in the communities of Meredosia, Henry and Lewistown, Illinois, to solicit public comment on refuge planning. Refuge staff have met with the Illinois Division of Water Resources, the Illinois Department of Natural Resources, and several non-government organizations. Staff have participated in several technical groups and have met with local organizations. Refuge staff and planners hosted a public meeting at the Dickson Mounds Museum to discuss the CCP. In addition, Refuge staff and planners have asked for regional office comment on the issues that should be considered in planning.

The Draft Comprehensive Conservation Plan was released for public review in September 2003. The Service asked that comments be returned by October 20, 2003. Three open house meetings were conducted to give people interested in the future of the Refuge Complex a chance to speak directly with Refuge staff and Service planners. These meetings were conducted on September 23, 2003, in Meredosia, Illinois; September 24, 2003, in Lewistown, Illinois; and September 25, 2003, in Henry, Illinois.

A summary of the comments received on the draft plan and how Refuge staff and Service planners responded to the comments is included in Appendix K.

2.2 Planning Issues and Concerns

The following paragraphs briefly describe the issues and concerns we heard in the scoping process when the planning project began.

2.2.1 Wildlife Management Issues and Concerns

- Protection of endangered and threatened species and restoring them to secure status in the wild. Federally listed species found on the Refuge Complex or species that could be candidates for reintroduction on Refuge Complex land include three threatened plants (Decurrent false aster, Mead's milkweed, and prairie white-fringed orchid); one endangered mollusk (Higgin's eye pearl mussel); one endangered bird (Least Tern), one threatened bird (Bald Eagle), and one endangered mammal (Indiana bat).
- Twenty-eight species of waterfowl are known to use the Refuge Complex, including Trumpeter and Tundra swans. The north and south pools of Lake Chautauqua provide prime habitat for diving ducks and dabbling ducks. Chautauqua NWR in particular provides a haven for more than 40 percent of the waterfowl that use the Illinois River segment of the Mississippi River flyway. Maintaining its major role in supporting waterfowl of the Mississippi River flyway since its inception is a concern for the Refuge Complex.
- Habitat loss and degradation have been identified as crucial factors in the decline of many grassland bird species.
- Habitat fragmentation increases the rate of predation and brood parasitism among bird species along the Illinois River.
- Approximately 102 species of fish, 37 species of mollusks, and 10 species of crustaceans have been collected within the vicinity of the Refuge Complex (Appendix C), including four state-listed endangered species (lake sturgeon, blacknose shiner, weed shiner, Iowa darter) and two state-listed threatened species (cisco and bantam sunfish). With improvements to habitat and water quality, populations of fish and mussels within the Illinois River Corridor could increase, and natural communities could become reestablished in areas where they have been eliminated or altered.
- The introduction of exotic and non-native species into the Refuge (e.g., carp, goldfish, zebra mussels, purple loosestrife, garlic mustard, reed canary grass, shattercane) represents a major threat to maintaining diverse and productive biological systems on Refuge land.
- Other exotic species present in the Illinois River have been intentionally introduced to the detriment of native species. The common carp was introduced as a valuable commercial fish, but is now regarded as a nuisance because of its habit of retarding the growth of aquatic vegetation by consuming it and by roiling the water so that increased turbidity reduces photosynthetic efficiency. The Asian grass carp was intentionally introduced by the State of Arkansas to control aquatic vegetation, and now appears to be reproducing in the Illinois River, Upper Mississippi River and Ohio River. The grass carp prefers the same types of aquatic plants as some waterfowl, such as the Canvasback, and may compete with them for food or limit the recovery of aquatic vegetation in the Illinois River. Another recent introduction, the silver carp and big-head carp, are plankton feeders and have become a significant portion of the fish biomass in the Illinois River.

2.2.2 Habitat Management Issues and Concerns

- Over browsing by deer produces significant changes to forest structure and composition. As such, many grazing-sensitive species have probably been eliminated from many forest remnants on Refuge Complex land and within the Illinois River Corridor, while those more tolerant to browsing (e.g., thorn-bearing taxa such as red haw, honey locust, gooseberry, blackberry) have probably become more abundant. Non-native species also tend to increase from over browsing, such as garlic mustard and buckbrush.
- Stemming the loss of habitat has been cited as a concern. Past damage to the Illinois River's biological diversity has mainly occurred at the species, ecosystem, and landscape scale. At the species scale, of the species present in the State of Illinois in 1900, about one in five fish, one in three amphibians and reptiles, more than half of all freshwater mussels, and one in five crayfish have been eliminated from the state or threatened by extinction (Illinois DNR 1996). The Refuge Complex and associated lands support diverse and abundant flora and fauna populations found along the Illinois River. These include over 404 species of plants, 45 species of mammals, 102 species of fish, 48 species of reptiles, 19 species of amphibians, 37 species of molluscs, 10 species of crustaceans, and 264 species of birds. Species-level protection has occurred mainly through federal and state efforts (i.e., Endangered Species Act of 1973,) and state regulatory programs.
- A primary goal for the Refuge Complex has been managing floodplain land to improve native biological diversity of the Illinois River Valley. The Refuge Complex has sought to accomplish this through appropriate management of the properties within the boundaries of each Refuge and in providing technical and financial assistance to landowners around each Refuge Unit who are interested in restoring or enhancing habitat on their lands. However, progress has been limited due to personnel and financial considerations. Of late, the Refuge Complex has been tasked with providing habitat for several regional species of management concern. However, the Refuge Complex currently lacks management guidance to direct these new efforts.
- The total wetland acreage in the Illinois River Corridor at the time of European settlement was approximately 350,000 acres. Today, less than half remain. State and federal management areas protect approximately 16,500 acres of palustrine-type wetlands. Another 16,000-plus acres are estimated to be protected by private duck hunting clubs. Currently only 53 backwater lakes survive along the full length of the Illinois River, and many of them are sterile systems devoid of aquatic vegetation. The once dynamic floodplain of the river has been reduced to roughly 200,000 acres, half the size it was 100 years ago. Once a river valley of diverse and productive wetlands, the actual water surface area within the corridor now accounts for roughly 60 to 100 square miles (40,000 to 70,000 acres).
- Forest resources along the Illinois River corridor have been impacted substantially by activities of man since European settlement. What was once a nearly continuous ribbon of bottomland forests providing migration and nesting habitat for warblers, Wood Ducks, hawks, woodpeckers, thrushes, and other woodland birds as well as spawning and feeding grounds for fish during spring floods. Many forest birds are declining as a result of destruction and degradation of bottomland forests. Brown-headed Cowbirds are an edge species and parasitize songbird nests along the edges of forests. Large

blocks of forests provided secure nesting habitat for many warblers whereas fragmented habitat favors the cowbirds and can be a biological sink for birds subject to this parasitism. Loss of mast producing species such as pecan and pin oak trees has reduced food resources for waterfowl, deer, turkey, and larger songbirds.

- By 1976, less than 1/100th of 1 percent, or 2,352 acres, of high-quality original native prairie remained in the Prairie State, and four of every five that remained were less than 10 acres in size (Illinois DNR, 1996). Loss of prairie within the Illinois River Corridor combined with changes in natural processes have had negative consequences for many grassland plants and associated animals. Historically, roughly 40 percent of the lower Illinois River was prairie. The loss of bottomland prairies, and the subsequent isolation of those areas, is detrimental to animals that depend upon large natural prairie areas.
- Prior to European settlement, oak savanna covered approximately 27-32 million acres of the Midwest (Nuzzo 1985). This same author indicates that in 1985, only 113 sites (2,607 acres) of high-quality oak savanna remained. Nationwide, over 99 percent of the original savanna has been lost, and mid-western oak savannas are among the rarest ecosystems in the nation. The once widespread oak savannas have become one of the nation's more endangered ecosystems (Noss et al. 1995). Development has destroyed, fragmented, and disrupted natural processes needed to maintain quality oak savanna ecosystems. Currently, no high quality savanna exists within the Refuge Complex nor is the Service aware of any being present in the Illinois River Corridor. The long-term effect of this landscape-scale loss of savanna has yet to be determined.
- Refuge land (as well as other protected land within the Illinois River Corridor) suffers from habitat fragmentation. Some of this results from dams along the river and tributaries, as well as levees that isolate the floodplain lakes from the river (which can be a barrier to fish migrations). Coupled with the levees affecting bottomland forests, there is no longer a continuous canopy along the river. The effects of these gaps in the corridor are largely unknown, although it is likely they impact the use of the corridor by migratory bird species.
- It is estimated that each year more than 14 million tons of sediment are transported through the Illinois River watershed. More than half of this is deposited in the Illinois River Valley. Peoria Lake, the largest and deepest bottomland lake along the Illinois River, lost 68 percent of its capacity between 1903 and 1985 (Illinois DNR, 1996). Problems associated with erosion and sedimentation are recognized as the number one ecological problem in the Illinois River-floodplain ecosystem and has taken its toll.

2.2.3 Visitor Services Issues and Concerns

- There is a strong demand for high quality, wildlife-dependent recreational activities on Refuge Complex land, including wildlife observation and photography, public hunting, and fishing.
- The Service and the public have identified several new facilities that will expand Refuge Complex recreational opportunities and support the long-term goals of the Refuge, watershed, and Illinois River Corridor.

- Some people have expressed interest in the Refuge Complex providing additional places to see wildlife (including access points) as well as additional lands to hunt and fish. In particular, there is an increasing demand for public hunting opportunities (mainly waterfowl and deer hunting) on the Refuge.
- Many of the existing visitor facilities at the Refuge need upgrading or lack accessibility for some visitors (internal issue). There has been expressed interest (internally and externally) for improving existing Refuge Complex infrastructure for safety and accessibility, improving visitor information systems (signs and brochures), and bringing Refuge facilities up to Service standards.
- Many individuals and groups have expressed concern that the Refuge is not well known and understood within the local area. Some area residents are unaware of the Refuge and of the many programs it offers. Several people commented that because it was a national wildlife refuge, they always assumed it was closed to the public, especially for hunting. Others commented they did not differentiate Refuge land from Illinois DNR land.

2.2.4 Other Issues Cited

- Several people have expressed concern that the 3x3 structure at the mouth of Quiver Creek should remain open until waterfowl hunting season closes for the purpose of keeping ice off Lake Chautauqua beyond natural freeze-up.
- Some neighboring farmers say that they are experiencing crop losses due to grazing by geese, squirrels and deer. Early season losses following emergence of corn and/or soybeans occur from all species on lands bordering the Refuge. Canada Geese graze on soybeans, and to a lesser degree corn, for several weeks after emergence. White-tail deer feed on crops throughout the growing season. Crop damage varies by species and location with some neighbors suffering greater losses than others.
- Avian botulism has been a serious problem on Lake Chautauqua with a loss of over 8,000 birds in 1997 and a loss of 2,623 birds in 1998. Staff from the Wildlife Health Laboratory in Madison, Wisconsin, provided assistance and confirmed that avian botulism was the agent of death of the birds. Losses were limited to 278 birds in 1999 but the number of birds lost in 2000 was 933. Refuge staff will continue to closely monitor the health of birds on the Refuge and react quickly and decisively to minimize losses to diseases.
- Two written comments and several oral comments from the public expressed concern about the amount of food presently produced for waterfowl on Chautauqua NWR and the potential for additional food production on Emiquon NWR. Some hunters suggested that the Service should provide only sanctuary for waterfowl and not produce any food. This was proposed so waterfowl would be more likely to fly off the Refuge Complex to private hunting clubs to find a food. Others expressed an opposite concern, saying that without food and sanctuary on Refuge Complex land, waterfowl would most likely pass over the area without stopping.