

U.S. Fish & Wildlife Service

Lost Mound

National Wildlife Refuge

Savanna, Illinois

Interim

Comprehensive Conservation Plan



U.S. Department of the Interior
Fish and Wildlife Service

3159 Crim Drive
Savanna, Illinois 61074
January 2002

Introduction

The Savanna Army Depot (Depot) is a 13,062-acre military installation that was closed in March 2000 by the Base Realignment and Closure (BRAC) Commission under Public Laws 100-526 and 101-510. Approximately 9,404 acres of the former Depot are proposed to be transferred to the U.S. Fish and Wildlife Service (Service) for operation as the Lost Mound National Wildlife Refuge (Lost Mound Refuge). The proposed refuge will include about 5,000 acres of bottomlands and about 4,400 acres of uplands. The Illinois Department of Natural Resources (IDNR) will enter into a cooperative agreement with the Service to



jointly manage the Refuge. The primary objective of the proposed Refuge is to provide migratory bird habitat and the continued conservation of wetlands and prairie habitat for the benefit of all wildlife species and wildlife-dependent public use.

This Interim Comprehensive Conservation Plan for the proposed Lost Mound Refuge presents a general outline on how the Refuge will be operated and managed by the Service and IDNR until such time as a full Comprehensive Conservation Plan can be completed. Both agencies are included in this planning document to facilitate

coordination of management efforts. As an interim plan, it does not provide extensive detail nor pinpoint exactly where facilities would be, nor does it show where public use would be allowed. This plan includes a general discussion of biological needs relative to Federal trust resource responsibilities within that portion of the Upper Mississippi River/Tallgrass Prairie Ecosystem found in Illinois and the management actions required to meet those specific biological needs. It is not intended to cover in detail the development or implementation of specific programs for administration, public recreational use, or management of these public lands. Specific access sites and activities would be determined through future planning in compliance with the National Environmental Policy Act (NEPA). However, this plan should answer those questions commonly posed by neighbors and the general public during the planning and public involvement process that is now beginning with respect to establishment of Lost Mound Refuge.

Three additional agencies will acquire a primary interest in the former Depot, and coordination with each of these partners will be required to cooperatively

manage the former Depot complex. The Service and IDNR will enter into cooperative agreement to jointly manage the Refuge. The U.S. Army Corps of Engineers (COE) has requested 460 acres to include the 183 acre Apple River Island and 277 acres to expand the Blanding's Landing recreation area. The Local Redevelopment Authority (LRA) has already received 2,800 acres for economic development purposes which may include light and heavy industry.

Savanna Army Depot was purchased by the U.S. Army in 1917 and was used as a proof and test facility for artillery guns and howitzers. Operations expanded with the addition of ordnance storage facilities and loading and renovating shells and bombs. In 1972, ammunition maintenance and supply operations were reduced. The Depot mission prior to closure was the receipt, storage, issue, and demilitarization of conventional ammunition and general supplies. The U.S. Army Defense Ammunition Center and School was located on the former Depot. The former Depot remains closed to general public access due to enforcement and environmental contaminant concerns. The former Depot was placed on the National Priorities List (Superfund) for clean-up in 1989 by the U.S. Environmental Protection Agency.

The Service is the primary Federal agency responsible for conserving, protecting, and enhancing the Nation's fish and wildlife resources and their habitats. The Service shares this responsibility with other Federal, State, tribal, local, and private entities; however, the Service has specific trustee responsibilities for migratory birds, endangered species, inter-jurisdictional fish, certain marine mammals, and lands and waters administered by the Service for the management and protection of these resources.

The Service operates more than 530 national wildlife refuges nationwide, waterfowl production areas in 10 states, and 51 coordination areas in 19 states, covering more than 92 million acres. These areas comprise the National Wildlife Refuge System, the world's largest collection of lands specifically managed for fish and wildlife. Approximately 76 million acres of these lands are in Alaska, with the remaining 17 million acres spread across the other 49 states and several Territories. There are seven national wildlife refuges in Illinois. The Savanna District presently manages over 52,000 acres stretching 90 miles along the Mississippi River from Rock Island, Illinois to Dubuque, Iowa. The Lost Mound Refuge is located within this area and will complement ongoing management programs.



Goals of the National Wildlife Refuge System

- To fulfill our statutory duty to achieve refuge purpose(s) and further the System mission.
- Conserve, restore where appropriate, and enhance all species of fish, wildlife, and plants that are endangered or threatened with becoming endangered.
- Perpetuate migratory bird, interjurisdictional fish, and marine mammal populations.
- Conserve a diversity of fish, wildlife, and plants.

- Conserve and restore, where appropriate, representative ecosystems of the United States, including ecological processes characteristic of those ecosystems.
- To foster understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use. Such use includes hunting, fishing, wildlife observation and photography, and environmental education and interpretation.

Refuge Administration

The proposed Lost Mound Refuge would become part of the National Wildlife Refuge System. Lost Mound staff would administer 9,404 acres of bottomland and upland habitat with IDNR providing joint management through a cooperative agreement. During the last several years, a permanent Refuge Operations Specialist has been assigned to represent the Service's interests on the former Depot. Temporary employees are hired during the field season when funding permits, and could include biological aides, laborers, interns, and personnel through the Youth Conservation Corps, Job Training Partnership Act, and other programs for high school and college students.

The annual budget for the Lost Mound Refuge is yet to be determined. Funding for Lost Mound Refuge will be requested in future budgets. The IDNR will enter a Cooperative Agreement to jointly manage the Lost Mound Refuge. There is currently a staff of three IDNR personnel at Lost Mound Refuge. Existing facilities at the former Depot are being used and no new facilities are currently proposed. The IDNR and the Service have co-occupied office space for the past 3 years. This has improved coordination of the two programs and provides a central location for the public to make contact with these management agencies.

Environmental Contamination, Health, and Safety Issues

Savanna Army Depot was placed on the National Priorities List for Superfund cleanup in 1989. Approximately \$320 million may be budgeted during the next 20 years for contaminants removal. Presently 69 environmental sites may require cleanup. Some of these contaminants include solvent, petroleum, lead, cadmium, and mercury. TNT contamination has been confirmed to have reached the groundwater and has spread three-fourths of a mile westward toward the Mississippi River. It is reported that 90 percent of the Depot has the potential to contain some unexploded ordnance to include 155 mm and 75 mm howitzers, mortars, grenades, and small arms ammunition.

These environmental contamination, health, and safety issues will be considered in identifying areas for public access to Lost Mound Refuge. The 9,404 acres that are proposed for addition to the National Wildlife Refuge System are to be used for conservation purposes, therefore the degree of clean-up will not be as strict as if housing or industry were proposed for the site. The U.S. Environmental Protection Agency (EPA), the Illinois Environmental Protection Agency (IEPA), and the Department of Army (DA) will ultimately determine when, and if, the contaminated sites are cleaned up to the extent that there are no environmental contamination, health, and safety concerns.

Habitat Management

The transfer of the former Depot lands presents the Service and IDNR with a unique opportunity to continue to preserve an ecologically significant environment. Habitat management goals will focus on providing natural ecological systems. Habitat management techniques will be used to promote biological diversity within the ecological systems. Due to the military mission, a majority of habitat has remained in relatively good condition. The bottomlands and uplands are representative of historic environments containing large contiguous tracts of riverine and upland habitat.

Wetlands: Approximately 5,000 acres of floodplain wetlands are found within the Lost Mound Refuge boundary. The wetlands include a mosaic of open water (lakes, ponds, Mississippi River), meandering backwater sloughs, floodplain forest, emergent marshes, and wet meadows. Lost Mound Refuge proposes to leave these wetlands in a natural condition and to manage these areas in a manner similar to other areas within the National Wildlife Refuge System. Burning and/or mowing could be used to remove undesirable vegetation or to control encroachment of woody vegetation. River habitat would be protected from livestock grazing and other intensive uses to reduce erosion and subsequent siltation of waters.



Grasslands: Approximately 4,400 acres of uplands are found within the Lost Mound Refuge boundary. These areas consist primarily of sand prairie associations, but also include an oak-ash savanna association. There are 488 buildings scattered throughout the grasslands.

Grasslands would be managed to promote migratory birds, native vegetation, species diversity, and endangered species conservation. Areas of existing native prairie would be managed to retard encroaching shrubs, trees, and non-native grasses. Management techniques would include burning, limited grazing, and mechanical, biological, and chemical treatment. Areas of non-native grasslands would be restored to native plants by seeding and/or transplanting. The feasibility of developing a plant nursery, as suggested by the LRA, will be examined by the IDNR. Management of the wetlands and the grasslands will contribute to meeting objectives of the Upper Mississippi River/Tallgrass Prairie Ecosystem.

Forests: Approximately 6,470 acres of forest are found within the former Depot and includes 4,743 acres of bottomland forest and 1,727 acres of upland forest. Forest management practices on the Refuge would include burning, harvesting, seedling planting, or habitat manipulation depending on the particular objective of each area. The feasibility of developing a tree seed orchard will be examined by IDNR.

Biological Monitoring

The proposed Lost Mound Refuge contains diverse biological communities that support 228 species of fish and wildlife and 102 species of plants. There are 47 State listed and two Federally listed threatened and endangered species present. Important biological considerations include the presence of Bald Eagle nesting and roosting areas, heron rookeries, waterfowl concentration areas, grassland bird populations, fish and shellfish habitat, and extensive floodplain forest that is used by many species of neo-tropical migrant birds.

Since the primary purpose for establishing a national wildlife refuge is to conserve wildlife and habitat, extensive biological surveys are conducted throughout the year to identify animal and plant population trends. This information is the basis for Refuge management decisions. A variety of wildlife surveys will be conducted to identify population densities and habitat use areas. Habitat surveys would include forest, wetland, and grassland inventories to document species diversity and densities.

Biological surveys would be conducted as a cooperative effort between IDNR and the Service. College, university, and other agencies would be encouraged to conduct research and population studies on plant and wildlife species.

The northern portion (approximately 850 acres) of the former Depot is presently identified in State of Illinois regulations as a mussel sanctuary and does not allow the commercial harvest of mussels. The Service will pursue mussel population investigations to determine the benefits that this sanctuary provides as well as other open water areas within the Refuge. Native mussel populations are threatened within the Mississippi River system due to several factors that include zebra mussel invasion, pollution, and sedimentation.

Public Access

Providing public access to IDNR and the Service managed lands will be important in keeping with the goal of the National Wildlife Refuge System. Lost Mound Refuge would provide a unique opportunity for outdoor enthusiasts to enjoy these public lands. The environmental contamination, health, and safety issues previously mentioned could restrict public access in certain areas.

Access to Lost Mound Refuge will need to be coordinated between the four partners (LRA, COE, IDNR, USFWS) due to the individual designated areas of use. The former Depot extends 13 miles and includes over 100 miles of interior roads. Presently only one entrance road is open. There are other access roads into the former Depot, but due to security requirements, these roads are closed. The present entrance road is located on proposed LRA lands. The Service has requested an easement for access to the entrance road as well as to other interior roads.

Geographically, the LRA area would be located at the southern end of the Depot and extend along the eastern boundary for approximately 2 miles. The Service land would extend along the northeastern boundary for about 10 miles. The IDNR designated lands extend along the east within the 10 miles identified for the Service. The COE parcels would extend along 1 mile of the northern end of the former Depot and the along the southern tip (Apple River Island).

The number of public entrances to the Service and IDNR lands would be limited for several reasons. The high speed rail crossings make additional entrances cost-prohibitive. Multiple entrances compound issues related to visitor use control and resource abuse, and they increase manpower costs that could be used for resource management. An internal circulation route will be developed in coordination with all partners on the the former Depot complex to determine public vehicular access routes. The needs of persons with disabilities will be considered during access planning for any refuge activity or facility.

The Service and IDNR will not have the resources to maintain the many miles of roads that are present within the proposed Lost Mound Refuge. Primary routes of travel for public access will be designated and the remainder of the roads closed to vehicular traffic. Many of the interior roads provide access to the igloos and warehouses, which will not be opened to general public vehicular access. Foot access into these areas would be allowed for hikers, birdwatchers, photographers, and others. Signs and leaflets would clearly indicate the open and closed areas of the Refuge.

Some habitat areas may become seasonally restricted sanctuary areas. These may include areas containing eagle nests and/or eagle roosts, heron rookeries, concentration areas for waterfowl, and areas where threatened and endangered plants are found.

Public Recreational Activities and Management

Wildlife-dependent public use is encouraged on refuges as long as it is compatible with the primary purpose of the area. Prior to its closure in March 2000, the Depot managed hunting, fishing and trapping programs for Depot employees, retirees, active and retired military personnel, and their guests. The Service and IDNR propose to offer these recreational activities to the general public, as well as add new programs.

Public recreational activities would be varied and could include both consumptive and non-consumptive uses. Actual uses will be identified through community involvement, public meetings, and planning efforts of a Citizen's Advisory Committee. General public use regulations, based on the National Wildlife Refuge System Act, are shown in Table 1 on page 7.

The Lost Mound Refuge will offer many public recreational activities. It is anticipated that the following public use activities would be allowed at the proposed Refuge.

Hunting And Trapping: Hunting of waterfowl, small game, turkey, and white-tail deer would be permitted in some Refuge areas in accordance with State regulations. These areas were once open to only military personnel and guests. Areas will be opened for public hunting dependent on the outcome of future management planning conducted with public input.

Fishing: Sport fishing would be permitted in accordance with State regulations. This area was once restricted to only military personnel and guests; it will now be open to the general public. Commercial fishing could be allowed under a Special Use Permit issued by the Refuge Manager.

Table 1: General Refuge Regulations

Public entry is permitted year round in those areas shown in the Refuge leaflet and marked by appropriate signs.

Vehicles are allowed only on main roads and trails where gates are open.

Use of the Refuge is limited to daylight hours only. No overnight parking is allowed.

Possessing or discharging firearms is prohibited except during established hunting seasons in areas open to hunting.

Disturbing or collecting any plant or animal is prohibited except under special use permit. Berry, nut, and mushroom picking are allowed in designated areas.

No person may search for, disturb, or remove from the Refuge any Native American artifact or other historical object, including military items.

Entering or remaining on the Refuge while under the influence of alcohol or other drugs is prohibited.

Dogs and other pets must be kept under control at all times.

Wildlife Observation and Photography: Many activities that facilitate wildlife observation and wildlife photography will be encouraged, including hiking, bike riding, cross-country skiing, and canoeing. The Service plans to establish a designated hiking, bike riding, and skiing trail system. A self-guided auto tour route covering several miles would be established. Boating and canoeing would be permitted.

Camping is not permitted on refuges unless it is necessary for the safe, practical and effective conduct of a wildlife-dependent recreational use. Since there are 16 known campgrounds that provide 1,000 campsites within 30 miles of the refuge, no camping will be allowed on Lost Mound National Wildlife Refuge. The Service will maintain the Coast Guard landing boat ramp. The ramp may need to be upgraded to handle anticipated use.

Environmental Education And Interpretation: Environmental education and interpretation programs would be designed to enhance the visitor's understanding of natural resource management programs and ecological concepts. Lost Mound Refuge would serve as an important "outdoor classroom" for area school districts. Teacher workshops would be offered to provide ongoing environmental education programs. Visitor facilities would be planned with the needs of students and teachers in mind. Interpretive programs would focus on self-guiding facilities such as auto tour routes, signed trails, leaflets, and interpretive signs located near interesting features. A visitor center would be set up within one of the existing buildings and contain an auditorium for slide and film presentations, exhibits, a classroom/meeting room, and possibly a bookstore offering natural resource materials to the public.

Law Enforcement: Enforcement of State and Federal laws on national wildlife refuges is important to safeguard resources and to protect and manage visitors. The Service intends to seek concurrent jurisdiction from the State of Illinois. Refuge Officers would work closely with IDNR Conservation Officers and local enforcement personnel.

Facilities Management

The Service will receive a total of 394 buildings including 359 igloos, 30 warehouses, four administration buildings, 12 miles of fencing, 8 miles rail line, 51 miles of roads, two bridges, a container loading pad, three large rail line loading docks, five loading platforms, and one office building. The igloos have concrete floors, walls, and ceilings with steel doors and earthen exteriors. The warehouses have concrete floors and tile walls with metal doors and shingled roofs. Some of the warehouses may be used for storage, but initially most of the igloos and warehouses will be left vacant. In the event that LRA finds suitable leasing for all of its warehouses and still needs additional storage areas for economic use, the Service has agreed with LRA to lease/rent these igloos and warehouses. If no other use can be identified for these buildings, they may be removed as funds become available in future years. In the meantime, all buildings have been secured to prevent unauthorized entry and to ensure the safety of refuge visitors.

There are over 50 miles of railroad tracks on the former Depot. The Service would acquire several miles of these tracks. The igloos and warehouses have a loop system of rail lines with loading docks and loading platforms. This system will be kept intact until the River Port Rail lease runs out in March 2004. These lines are an inappropriate use and will be removed as funds become available. One office building will be transferred in fee title to Lost Mound Refuge.

The boundary of all Refuge lands would be posted with national wildlife refuge signs at regular intervals to identify to the public where the Refuge boundary is. Fencing or other types of barriers may be constructed to control grazing or to control off-road vehicle use that can damage sensitive habitat, such as the upland sand prairie areas. Interpretive signs and kiosks would be placed throughout Lost Mound Refuge to inform the public of Refuge regulations.

The Service will cooperate with LRA, COE, IDNR, State, County, and township officials in the maintenance of roads that cross Lost Mound Refuge. Roadside mowing within the Refuge would be completed in accordance with State and local laws.

Fire Management

It is the policy of the Service and IDNR to use fire when it is the most appropriate management tool for reaching habitat objectives. For example, a prescribed fire within the sand prairie uplands can serve to maintain the prairie area at the desired successional stage. Wildfires, however, would be aggressively suppressed unless natural fires are a part of the approved fire management plan. The use of prescribed fire will be dependent upon an approved plan and areas being cleared of explosives and or hazardous materials that would create a health and safety issue if fire were used.

The IDNR and the Service have staffs trained in fire management and an array of equipment for fire suppression. To supplement these capabilities, cooperative agreements and contracts with State agencies and community fire departments

would be put together to tap local firefighting expertise. This is especially important for structural fires since local fire departments have the special training and experience required for this type of fire fighting.

Crop Depredations and Pest Control

The Service and IDNR would provide technical advice to landowners surrounding Lost Mound Refuge if crop losses occur from migratory birds, deer, or other refuge wildlife. The U.S. Department of Agriculture has an Animal Damage Control Division that can provide more direct assistance. It is Service policy to control those weeds listed as noxious by the State. This control would emphasize non-chemical methods.

Environmental Contamination, Health, and Safety Concerns

A large portion of the former Depot has the potential to contain unexploded ordinance. In addition, 69 environmental sites may require cleanup. It is imperative that liability for the future cleanup of known as well as unknown environmental contaminant areas be the responsibility of the Department of Army. The Service has no plans to construct any buildings outside areas cleared of unexploded ordinance by the Army, however, some Refuge activities as well as public use activities will require subsurface disturbance. These activities include: placement of boundary posts, sign posts, kiosks; scenic overlook construction; and trapper stakes and/or hunting blind supports driven into the ground. The transfer of property should identify:

- 1) The Department of Army is responsible for any future hazards from unexploded ordinance and environmental contamination and,
- 2) The Department of Army should pay for the cost of sweeping an area if it is identified for construction at a later date.

Railroad Lines And Utility Infrastructure

The Burlington Northern Railroad Company has a major railroad line located along the east edge of the former Depot and traveling the entire length. Trains pass through on an hourly basis at speeds reaching 50 miles per hour. Only one railroad crossing has warning lights. The Service must consider the liability for public access at several railroad crossings. The purchase, installation, and maintenance of railroad crossing signals would be an expensive proposition.

There are many miles of overhead electrical power lines and underground telephone cables. However, all of these utilities are under a right-of-way easement to be maintained by the utility company.

Staff, Materials, and Equipment Needs

Lost Mound Refuge will provide a unique opportunity for the Service to acquire an area of high environmental value. This natural area will require some habitat enhancement and maintenance. In addition, there will be many roads to close off (presumably with gates) and miles of roads to maintain.

The proposed Lost Mound Refuge presently has one permanent staff member assigned from the Savanna District (District) of the Upper Mississippi River National Wildlife and Fish Refuge. The IDNR has five staff onsite. District work loads are heavy and some refuge management activities are not being accomplished. If the opportunities at the former Depot are to be implemented, it will be necessary to prioritize the existing work load, cut back existing programs, and use outside help.

The closure of the Depot has generated a great deal of public interest because it will create an opportunity for people to visit an area where access was previously limited and participate in recreational activities that were not available to everyone. The ultimate success of Lost Mound Refuge will be dependent upon how much time, effort, and dollars the Service can put into this new program. There are many opportunities available at Lost Mound Refuge for public recreation, environmental education, and outreach programs. However, it will require increased funding or some significant sacrifices of other Service programs to operate above the “caretaker” status. The degree of success of the resource and facility management of Lost Mound Refuge will depend to a large degree upon additional funding, partnerships with the IDNR, LRA, COE and others, and volunteer assistance and support from private individuals and groups.

