

U.S. Fish & Wildlife Service

Lost Mound

National Wildlife Refuge

Environmental Assessment and Interim Comprehensive Conservation Plan

January 2002



Contents

Introduction.....	1
1.0 Purpose and Need for Action	1
1.1 Purpose	1
1.2 Need for Action	1
1.3 Decisions to be Made	2
1.4 Background	2
2.0 The Alternatives	4
2.1 Alternatives Considered but Eliminated from Further Study	4
2.2 Alternatives Carried Forward for Detailed Analysis	4
2.2.1 Alternative A: No Action	4
2.2.2 Alternative B: Refuge Establishment / No Public Use	5
2.2.3 Alternative C: Refuge Establishment / Limited Public Access (Preferred Alternative).....	5
3.0 Affected Environment	5
4.0 Environmental Consequences	6
4.1 Effects Common to All Alternatives:.....	6
4.1.1 Reuse of Depot Facilities.....	6
4.1.2 Historic Resources	6
4.2 Environmental Consequences by Alternative	6
4.2.1 Alternative A: No Action	6
4.2.2 Alternative B: Refuge Establishment / No Public Use	7
4.2.3 Alternative C: Refuge Establishment / Limited Public Use (Preferred Alternative).....	8
5.0 List of Preparers	9
6.0 References, Consultation and Coordination	9
7.0 Public Comments on Draft Environmental Assessment	9

Interim Comprehensive Conservation Plan

Interim Compatibility Determination

Introduction

The U.S. Fish and Wildlife Service (Service) and U.S. Army (Army) have negotiated a Memorandum of Agreement (MOA) under which much of the former Savanna Army Depot (Depot) in Northwestern Illinois will become Lost Mound National Wildlife Refuge (Lost Mound Refuge). The area is notable for its immense grasslands (4,400 acres) and bottomland forest (5,000 acres) habitats.



Lost Mound Refuge supports endangered Higgins' eye Pearlymussel (*Lampsilis higginsii*) and the threatened Bald Eagle (*Haliaeetus leucocephalus*). The Service has negotiated a Cooperative Agreement with the Illinois Department of Natural Resources (IDNR) for joint management of the area.

This Environmental Assessment (EA) has been developed by the Service in compliance with agency decision-making requirements of the National Environmental Policy Act of 1969, as amended.

1.0 Purpose and Need for Action

1.1 Purpose

The purpose of the proposed action is to preserve, restore, and manage 9,404 acres of high quality wildlife habitat along the Upper Mississippi River in Illinois at no acquisition cost to the Service. The goal of the Lost Mound Refuge is to manage for migratory birds.

1.2 Need for Action

The 4,400 acres of native sand prairies and sand savannas at the former Savanna Army Depot are some of the last remaining prairies of their kind in Illinois and possibly the entire Mississippi River watershed. The area is also notable for its extensive 5,000-acre bottomland forest. These uplands and wetlands provide habitat for two federally-listed threatened and endangered species and 47 State listed species. These valuable habitats are increasingly rare in the developed landscape of the Midwest and there is a need to protect such sites whenever possible. Just as rare is the opportunity to let people enjoy such areas and learn more about it. People need to understand their natural environment and how it works in order to value it.

The unique, natural features of the land comprising the former Savanna Army Depot could be significantly impacted or even lost altogether without action by the Service.

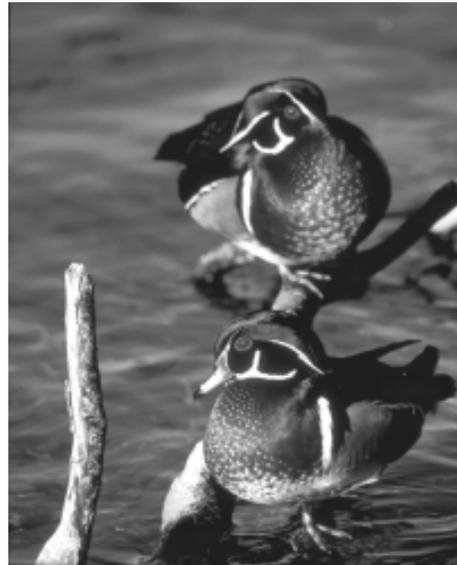
1.3 Decisions to be Made

This Environmental Assessment is an important step in the Service's formal decision-making process. In compliance with the National Environmental Policy Act, the Regional Director, Great Lakes-Big Rivers Region, will consider the information presented in this document to select one of the alternatives.

The Regional Director will determine whether the preferred alternative will or will not have a significant impact on the quality of the human environment and issue a Finding of No Significant Impact or a Decision of Significant Impact. A Finding of No Significant Impact (FONSI) means that the preferred alternative is accepted and can be implemented in accordance with other laws and regulations. A Decision of Significant Impact would indicate the need to complete an Environmental Impact Statement or a rejection of the project proposal.

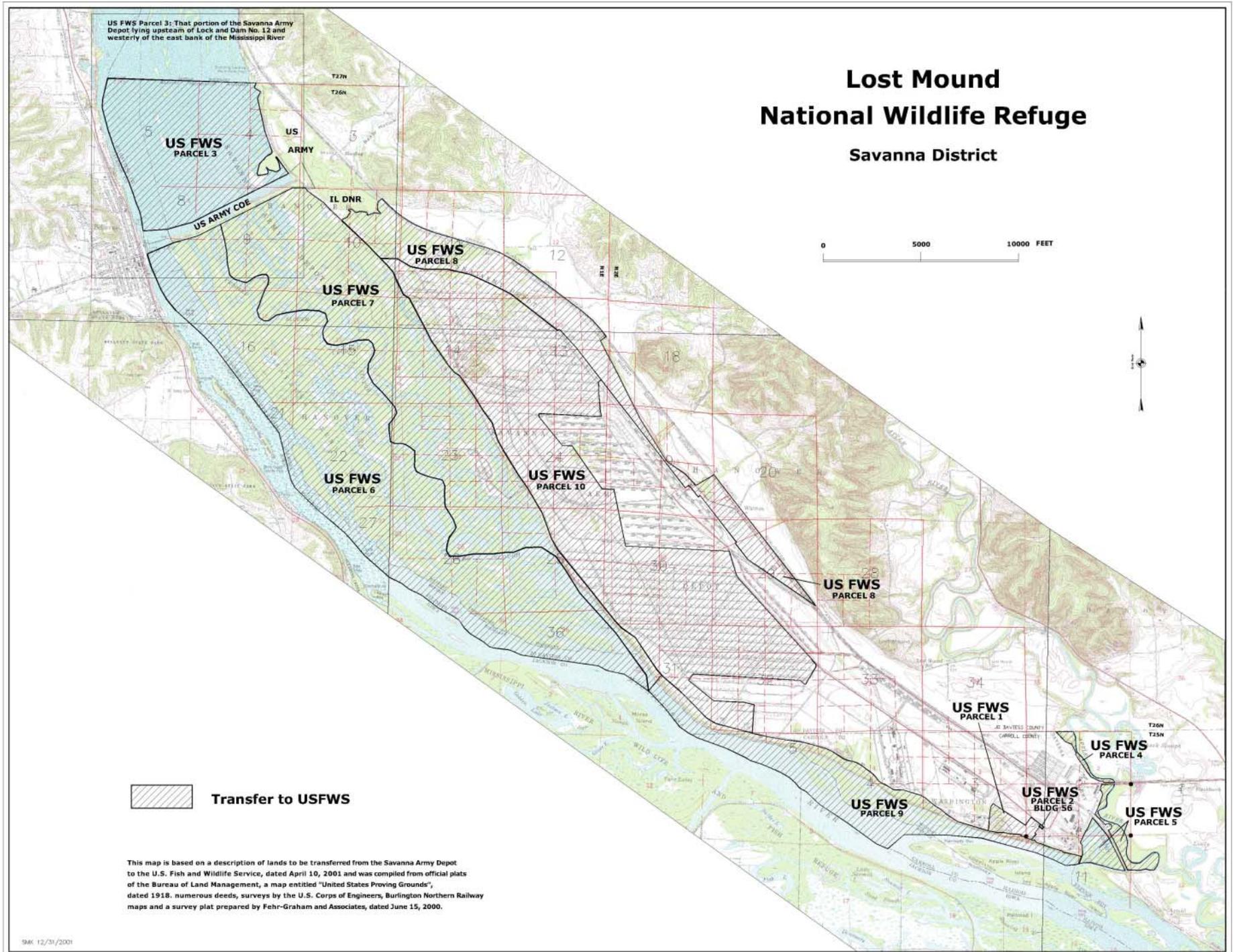
1.4 Background

The 1995 Base Realignment and Closure Commission (BRAC) made recommendations for the realignment and closure of the Depot and Congress approved the plan. The Depot operated from 1917 through 2000 and was initially used as a test firing range. It was later modified into a storage, disposal and manufacturing facility for munitions and explosives. The Depot is located on 13,062 acres of land in northwestern Illinois along the Mississippi River. Through the disposal process the Service could acquire 9,404 acres. The value of this area for threatened, endangered or sensitive species and habitats has only partially been identified. The IDNR was given limited access in 1978 to manage natural resources and begin research. The Service and IDNR believe the bottomland forest and sand savanna/prairie habitats in this area contain significant floral and faunal resources of value to the State and Region. However, the quality of these habitats for Regional and State priority fish, wildlife and plant species has never been assessed. A complete survey of these natural assets is essential for future conservation management.



Approximately 2,800 acres in the southern portion of the former Depot is being developed by private interests. The Jo-Carroll Depot Local Redevelopment Authority (LRA) is the agency responsible for transfer of former Depot land to a private interest. Figure 1 depicts the future distribution of ownership and management rights on the former Depot. Other stakeholders receiving land management privileges include the State of Illinois and the U.S. Army Corps of Engineers

Figure 1: Lost Mound National Wildlife Refuge



2.0 The Alternatives

The Department of the Army's Final Environmental Impact Statement for Disposal and Reuse of Savanna Army Depot Activity, Savanna, Illinois (FEIS) published in 1997 identified and compared several general reuse alternatives. The Service is adopting the preferred alternative identified in the FEIS. The FEIS extensively examines the environmental and socioeconomic consequences of reuse of the former Depot as a wildlife refuge. However, the FEIS does not provide much information on potential recreational uses and public access to the future refuge. The authors of this EA view the public access issue as a key consideration for this EA. The No Action alternative, which assumes no Service involvement, is also considered.

The National Wildlife Refuge System Improvement Act of 1997 identified six priority wildlife-dependent public uses that may occur on a refuge if determined to be compatible with the mission of the National Wildlife Refuge System and the purposes of the refuge. Wildlife-dependent public uses are defined as hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation. All six priority public uses have previously occurred on the Depot through the Depot Sportsmen's Club. This Club permitted only Federal employees, military personnel and their guests access and participation.

2.1 Alternatives Considered but Eliminated from Further Study

Several management alternatives will not be evaluated in this EA because they were addressed in the Depot FEIS. The alternatives included the Army's No Action Alternative for redevelopment and the Alternative to Dispose Unencumbered. These alternatives were ruled out from further study because of the Army's exhaustive investigation for the Depot FEIS. Biological and cultural resources and other environmental parameters are described in great detail.

Because the Depot has been identified as a Superfund site and placed on the National Priorities List, and also due to safety concerns over unexploded ordnance, land will not be transferred without encumbrances. The Service will not accept land in fee title if it contains unexploded ordnance or other environmental contaminants. Land will only be accepted in fee title once it is cleared of unexploded ordnance and determined to be clean and suitable for transfer by the Base Closure and Transfer Team. Some land may not be approved for fee title transfer by the team due to an unacceptable level of financial and public safety liability for the Service. Such lands will be managed under an MOA between the Service and Army. A Level 2 pre-acquisition contaminants survey completed for the Service details this issue.

2.2 Alternatives Carried Forward for Detailed Analysis

2.2.1 Alternative A: No Action

The Lost Mound Refuge would not be established under the No Action alternative. The Army would retain land and re-appropriate as necessary to remove land from its property inventory.

2.2.2 Alternative B: Refuge Establishment / No Public Use

The Service would establish the 9,404-acre Lost Mound Refuge but no public access would be allowed. The Lost Mound Refuge would not be open to the general public except in cases of emergency wildlife management actions (i.e. deer hunts for population control). The area would be managed solely as a protected wildlife sanctuary with access only for refuge administration.

2.2.3 Alternative C: Refuge Establishment / Limited Public Access (Preferred Alternative)

The Service will establish the Lost Mound Refuge and allow for limited public access. Placing limits on public access will give Refuge staff the opportunity to manage endangered species and critical migratory bird habitat while still providing safe wildlife-dependent recreational use. Boat access to the backwater channels can be limited to reduce disturbance to eagle nests or the Great Blue Heron rookery. The Lost Mound Refuge will allow public use and access on the uplands as approved by the Refuge Manager. Restrictions will be required to protect the fragile native sand prairie /savanna habitat.

3.0 Affected Environment

The landscape of the proposed Refuge includes floodplain forests, backwater sloughs, upland hardwood forests and sand prairie associations. The native sand prairies and sand savannas at the former Depot, encompassing 4,400 acres, are some of the last remaining habitats of their kind in the State and possibly the entire Mississippi River watershed. The proposed Lost Mound Refuge will protect a 7-mile long sand dune along the river's edge that rises up to 60 feet above the Mississippi River.



The study area also includes 5,000 acres of bottomland forest that were designated as the Bellevue-Savanna National Forest by President Calvin Coolidge in 1926. The federally-listed endangered Higgins' eye Pearlymussel and the threatened Bald Eagle are found in the bottomland area. In addition, there are 47 State-listed species of plants and animals in the uplands and bottomlands. A survey of the mussels in and around the Lost Mound Refuge is currently under way. To date, 23 mussel species have been identified in the Apple River adjacent to the proposed Refuge. Four nesting pairs of Bald Eagles use the backwaters area. Winter Bald

Eagle counts have been recorded as high as 400 along the shoreline and within the interior backwaters area. A Great Blue Heron rookery is also located in the bottomlands.

More detail of the local physical, cultural and biological resources can be found in documents such as the Depot FEIS, a report entitled "Expansion of the Upper Mississippi River Wildlife and Fish Refuge on the Savanna Army Depot" (Clarion Associates, Inc. 1997) and within the Draft Conceptual Management Plan (USFWS 1996) published as an appendix to the FEIS.

4.0 Environmental Consequences

The environmental, social and economic benefits of the Depot reuse and No Action alternative are fully explored in the 1997 FEIS. However, specific impacts related to habitat, trust resources of the Service such as migratory birds, and new recreational opportunities for the public were not addressed in detail in that document. The following issues/concerns apply directly to the Service's mission and the action of creating a National Wildlife Refuge.

4.1 Effects Common to All Alternatives:

4.1.1 Reuse of Depot Facilities

Under all alternatives, the Jo-Carroll Local Redevelopment Authority will continue to develop industrial and commercial areas on the former Depot (Figure 1). The infrastructure of the public utilities including sewer, water and power will be maintained and provide services to local businesses. Activities that occur on the commercial areas should have minimal impact on the environment of the proposed Refuge.

4.1.2 Historic Resources

Cultural and historical resources will be considered under each alternative. The U.S. Army and the Service are both federal agencies and subject to the same laws protecting historical sites. Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to identify cultural resources on federal property, evaluate those resources for the National Register of Historic Places, estimate potential effects of federal actions, and identify mitigation measures. The Illinois State Historic Preservation Office has provided consultation through development of the FEIS and during the Depot reuse decision process.

4.2 Environmental Consequences by Alternative

4.2.1 Alternative A: No Action

Fish and Wildlife Habitats: Loss of sand savanna/prairie habitat through natural succession would occur without an active Wildlife Management Activities Plan (attachment to MOA). The Plan is currently approved by the Army. With no action, the Army would retain ownership of the sand savanna/prairie and backwaters areas and allow habitat to follow the natural succession process.

Threatened and Endangered Species: Loss of important habitats for both Federal and State-listed threatened and endangered species could occur under the No Action alternative. Bald Eagle wintering concentrations could be disturbed if the bluff area is developed under a new Depot disposal scenario.

Migratory Birds: The significant sand savanna/prairie habitat loss under this alternative would impact nesting songbirds. Several sand savanna/prairie-dependent species require large tracts of grass cover for nesting success. The No Action alternative could lead to the loss of this habitat and all neo-tropical migrant birds found here.

Recreation and Environmental Education: Recreational uses and environmental education would not be allowed under this alternative. Public use would remain in the control of the Army and thus, with the Army's limited staff and

funding, the public would not have access to this area. Public access would be prohibited due to the presence of unexploded ordnance, environmental contaminants, and other safety and law enforcement issues.

Socioeconomic Environment: Operation of the Depot ceased in March 2000. The economic impacts of the base closure have been realized in the intervening years. Due to unexploded ordnance, the Army would likely continue to manage the site in caretaker status. The No Action alternative would likely result in little additional economic impact. Local businesses would not benefit from an increase in visitors to the former Depot.

Partnerships and Cooperative Relationships: No new Service partnerships would result from this alternative. The Service and the Army have partnered to allow the Service to manage natural resources. The Service and IDNR have been working together since 1995 under a preliminary Cooperative Agreement. These two relationships would end. The Service, IDNR and Army could negotiate a cooperative relationship for wildlife habitat management under a limited term agreement. However, future alternative Depot reuse options, and Service funding for off-refuge work, could limit this relationship.

4.2.2 Alternative B: Refuge Establishment / No Public Use

Fish and Wildlife Habitats: Existing wildlife habitats would be maintained, increased and restored under this alternative. The Service would pursue an MOA with the Army for the management of 9,404 acres. A Cooperative Agreement between the Service and IDNR would maintain 4,400 acres of sand savanna/prairie and 5,000 acres of forested backwaters.



Threatened and Endangered Species: The federally-listed endangered Higgins' eye Pearlymussel and the threatened Bald Eagle would both benefit from this alternative. The 780-acre State of Illinois designated mussel sanctuary would be protected from future disturbance. Nesting and wintering concentrations of Bald Eagles would receive increased protection through Service management of the area. The sensitive sand prairie uplands, with more than 30 state-listed plant species, may receive a slightly higher level of protection under the No Public Access alternative than under Alternative A or C. This is because broader public use of the uplands may result in some plant losses due to foot trampling or illegal plant collection.

Migratory Birds: Refuge establishment would protect existing migratory bird diversity. Expanded forest and grassland habitat management actions should lead to an increase in breeding/nesting habitat. Bird species diversity would remain stable or increase. Active management and restoration would increase and improve migratory bird habitat.

Recreation and Environmental Education: No recreational uses and environmental education programs would be allowed onsite. The proposed visitor safety precautions (visitor training, gate closures, limited entry permit system) under the draft Public Access Plan would not be necessary under this alternative. These uses would remain in the control of the Army. The public would not have access to this area because of the Army's limited staff and funding constraints, and because of the presence of unexploded ordnance.

Socioeconomic Environment: Same as Alternative A. Refuge establishment without public use would not allow for an increase in eco-tourism and spending within the local economy. However, the local economy would benefit from a slight increase in federal spending for Refuge operations.

Partnerships and Cooperative Relationships: Partnership opportunities would be limited under this alternative. It would be difficult to attract the interest of local business, sporting and environmental groups without access to the Refuge itself. The IDNR and a few national organizations and regional universities may be interested in assisting with wildlife research projects.

4.2.3 Alternative C: Refuge Establishment / Limited Public Use (Preferred Alternative)

Fish and Wildlife Habitats: Same as Alternative B, except the public will be given the opportunity to participate in limited hunting, fishing, environmental education, interpretation, viewing and photography programs. A few small sites throughout the new Refuge could be impacted by facilitating public use. However, any future public use support facilities, including boat landings and parking areas, will receive specific environmental review.

Threatened and Endangered Species: Same as Alternative B for federally-listed species. Some loss of state-listed plant species and habitat is possible with limited public use. However, use of the uplands will be limited to established trails and roads. The IDNR will also be on-site to identify and mitigate potential disturbance of sensitive habitats.

Migratory Birds: Same as Alternative B.

Recreation and Environmental Education: Wildlife-dependent recreational opportunities will increase under this alternative. The Lost Mound Refuge will continue wildlife dependent public uses administered with a limited entry, permitted, or guided system as outlined in the draft Public Access Plan (USFWS 2001, in prep.). More information on general refuge regulations, and the types of public uses contemplated at the proposed Refuge, can be found in the Interim Comprehensive Conservation Plan attached to this EA.

The Service's mandate for environmental education and interpretation will lead to new opportunities for local area schools and residents. Guided interpretive tours are proposed within the draft Public Access Plan. The existing road network, future trails system, and the diversity of habitats and species will make the Lost Mound Refuge a quality location for educational purposes.

Socioeconomic Environment: The number of visitors attracted to Lost Mound Refuge will increase with each passing year. The report "Maximizing the Economic Benefits of the Expansion of the Upper Mississippi River Wildlife and Fish Refuge on the Savanna Army Depot" (Clarion 1997) examines the impact a refuge has on the local economy. The Clarion Report provides information about how wildlife observation in general provides recreation as well as a source of income for surrounding communities. Local sporting goods stores, gas stations and hotels may be among the businesses to benefit from the new Refuge.

Partnerships and Cooperative Relationships: The close working relationship with the IDNR and U.S. Army Corp of Engineers would continue under this alternative. Local sporting groups such as hunting and fishing clubs are also likely supporters of Refuge activities. Many national wildlife refuges have

sponsor organizations or “Friends” groups. These groups provide a ready pool of volunteers, community contacts and they also seek monetary grants for projects on a refuge from private and public sources. Establishment of the Lost Mound Refuge may lead to the formation of a Friends group.

5.0 List of Preparers

Alan G. Anderson, Refuge Operations Specialist, Savanna District, Upper Mississippi River National Wildlife and Fish Refuge, Savanna, Illinois.

Gary E. Muehlenhardt, Branch of Ascertainment and Planning, U.S. Fish and Wildlife Service, Minneapolis, Minnesota.

6.0 References, Consultation and Coordination

Clarion Associates, Inc. 1997. Maximizing the Economic Benefits of the Expansion of the Upper Mississippi River Wildlife and Fish Refuge on the Savanna Army Depot.

Gosse, Jeff. USFWS. Minneapolis, Minnesota. Personal Communication.

Robb, Joseph R. USFWS. Madison, Indiana. Personal Communication.

Sandusky, M. C. 1997. Final Environmental Impact Statement for BRAC 95 Disposal and Reuse of the Savanna Army Depot Activity, Savanna, Illinois. U.S. Army Materiel Command, Alexandria, Virginia.

U.S. Fish and Wildlife Service. 1997. Conceptual Management Plan for the Savanna Army Depot Wildlife Management Unit, Savanna, Illinois.

7.0 Public Comments on Draft Environmental Assessment

The Service has received about 40 letters, postcards and e-mail messages from people concerning the proposed Refuge. Comments were received from local residents, individual Illinois and Iowa residents, conservation groups and the Illinois Department of Natural Resources. All of the people who wrote to us expressed support for the concept of a national wildlife refuge at the former Savanna Army Depot. We received only a few specific comments about future refuge programs. More than one-half of the writers specifically expressed support for Alternative C, Refuge Establishment / Limited Public Access. However, a few people suggested that the Service should be liberal when deciding how much land should be available for public recreation.