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ENVIRONMENTAL ASSESSMENT

UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT PROGRAM
HABITAT REHABILITATION AND ENHANCEMENT PROJECT

PLEASANT CREEK WILDLIFE AREA
POOL 13, MISSISSIPPI RIVER MILES 548.7 - 552.8
JACKSON COUNTY, IOWA

NOVEMBER 2000



**US Army Corps
of Engineers**
Rock Island District



REPLY TO
ATTENTION OF:

CEMVR-PM-AR

**DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004**

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BACKGROUND INFORMATION

The Upper Mississippi River Wildlife and Fish Refuge (the Refuge) is the longest wildlife refuge in the continental United States, stretching 284 miles between Wabasha, Minnesota, and Rock Island, Illinois (Havera 1999). The Refuge was established in 1924 to protect bottomland habitat for migratory birds and fish. It encompasses approximately 194,000 acres in parts of Minnesota, Wisconsin, Iowa, and Illinois, including parts of 19 counties and 2 U.S. Army Corps of Engineers (Corps) districts. The Corps has primary administrative and management responsibility for more than half of the land within the Refuge. Corps-administered lands are outgranted to the U.S. Fish and Wildlife Service (USFWS) for management of fish and wildlife as part of the Refuge. The Refuge is divided into four districts, each with a district manager. These four districts include the Winona District, the La Crosse District, the McGregor District, and the Savanna District.

Many species of waterfowl migrate through the Refuge each fall and spring. Historically, the Mississippi River Valley has been one of the most important migration areas for mallards in the United States. Migration during the fall and spring is an energy-demanding activity. Migrants need access to nutritious foods and rest at stopover areas to replenish reserves and satisfy the energetic costs of migration. As a result, waterfowl rely on diverse habitats at mid-migration latitudes to satisfy nutritional needs of various events during their annual cycle. It is recommended that waterfowl refuges used by migrating birds be approximately 50 miles apart in areas where habitat is continuous. Mallards can range 25 miles from rest lakes to feed; all water areas between refuges spread 50 miles apart would be within their daily flight range (Havera 1999). This so-called "string of pearls" is invaluable to the successful migration of waterfowl.

I. AUTHORITY AND PURPOSE.

The authority for this report is provided by Section 1103(e)(5) of the Water Resources Development Act of 1986 (33 U.S.C. 652(e)(5), as amended by Section 509(c)(3) of the Water Resources Development Act of 1999 (113 Stat. 340)). The proposed project would be funded and constructed under this authorization.

The purpose of this Environmental Assessment (EA) is to comply with the National Environmental Policy Act of 1969 (NEPA). This EA addresses the impacts associated with the proposed and alternative structural modifications (33 CFR 230/ER 200-2-2).

II. PROJECT LOCATION, DESCRIPTION, AND GOALS.

The Pleasant Creek Wildlife Area (Pleasant Creek) is within the Savanna District of the Refuge and is located on the right descending bank of the Mississippi River in Pool 13 between River Miles 548.7-552.8, approximately 4 miles south of Bellevue, Iowa (see plate EA-1 in Appendix B).

Golden Lake, Flat Lake, Western Pond, Jackson Lake, Upper and Lower Bonnie Lakes, and Goose Lake are the principal water bodies, aside from the adjacent Mississippi River. Most of the remaining project area is covered by bottomland hardwood forest typical of the Upper Mississippi River Valley. Plate EA-2 (Appendix B) shows the dominant vegetation types in Pleasant Creek. The primary uses of Pleasant Creek to date have been wildlife observation and recreational fishing. Because it is a closed area, there is no camping, boating, or hunting during fall migration. The area is also closed to vehicle traffic, with the exception of state and government vehicles for maintenance and/or survey work performed on the existing levee and spillways. Existing water control structures and other facilities currently operated for habitat management purposes include five stoplog structures, one culvert, and two spillways.

Successful operation of the Refuge depends on the ability to control water levels in the project area. The native moist-soil plants provide a high quality food base for resident and migratory wildlife. Frederickson and Taylor (1982) defined moist-soil management as the manipulation of soil and water to produce food and cover in areas that experience occasional flooding. Moist-soil management continues to be one of the most effective management techniques for improving migratory waterfowl habitat on public and private lands. The primary objective of moist soil management is to mimic the natural (historic) water regime by lowering water levels during summer to expose mudflats through drawdown for germination of moist-soil vegetation.

Existing facilities at Pleasant Creek provide only limited water level control capability. The success of water level control efforts depends on whether water levels on the Mississippi River remain below elevation 594 National Geodetic Vertical Datum (NGVD) (the existing levee elevation) during the critical drawdown period. By controlling the frequency, timing, length, and depth of water level manipulations, necessary habitat resources can be produced at times coincident with migration and other events in the annual life cycle of waterfowl.

The proposed low-level closure dike would be constructed using borrow material from within the existing agricultural field. Construction of the dike would require clearing of approximately 3 acres of bottomland forest vegetation, primarily second growth silver maple and cottonwoods. Following construction, the dike would be reseeded with flood-tolerant grass species to control erosion and protect the integrity of the structure. Construction of pumping and drainage facilities would occur in areas that have previously been disturbed. Cleared areas would be allowed to naturally vegetate. Clearing in this area would be minimized, and no permanent changes in vegetative cover are anticipated. The loss of 3 acres of trees would be mitigated for during post-construction. The trees would be planted within the Pleasant Creek complex and would consist of mast-producing trees, including pecan, grown from native stock found in Pleasant Creek.

The primary objectives of the Pleasant Creek Habitat Rehabilitation and Enhancement Project (HREP) are to increase the rate of success of emergent and moist-soil vegetation, and to increase quality food and cover for migrating waterfowl, terrestrial birds, and mammals. The objectives would be achieved by completing a perimeter water control dike to protect the area from minor water level fluctuations on the Mississippi River and maintain desired water levels within the moist soil management unit (MSMU).

III. ALTERNATIVES.

A. No Action Alternative

The No Action Alternative would be the continuation of existing habitat conditions. No physical changes, habitat improvements, or management changes would be made at the site.

B. Alignment Alternatives

All of the alternatives, with the exception of No Action, also include the construction of a trash rack structure in Harris Slough and the placement of riprap for bankline protection along the riverward side of the existing perimeter dike (see paragraphs C and D and plate EA-3 in Appendix B).

B1a. With Water Control and With Mast Tree Planting

This alternative would involve the construction of a low dike, with a top elevation of 594 feet, around a 42-acre portion of the existing cropland. Water levels inside of the MSMU would be controlled through the use of a well to pump water into the MSMU and a water control structure that would allow water to be released from the MSMU. Natural flooding, resulting from overtopping of the existing Mississippi River dike, is expected to inundate the unit less than 5 percent of the time during the growing season. In addition, this alternative would include planting the remaining 7 acres of existing cropland to mast-producing trees. The tree planting area would not be included in the MSMU, as the dike would not encompass it.

B1b. Without Water Control and With Mast Tree Planting

This alternative would involve constructing a dike in the same location as the previous alternative, but water levels in the MSMU would not be controlled. The MSMU would be inundated when the existing Mississippi River dike is overtopped (approximately 5 percent of the time during the growing season) or through gravity filling via the water control structure and would remain inundated until water levels drop naturally. In addition, this alternative would include planting the remaining 7 acres of existing cropland to mast-producing trees. The tree planting area would not be included in the MSMU, as the dike would not encompass it.

B1c. With Water Control and Without Mast Tree Planting

This alternative would involve the construction of a low dike, with a top elevation of 594 feet, around a 42-acre portion of the existing cropland. Water levels inside of the MSMU would be controlled through the use of a well to pump water into the MSMU and a water control structure that would allow water to be released from the MSMU. Natural flooding, resulting from overtopping of the existing Mississippi River dike, is expected to inundate the unit less than 5 percent of the time during the growing season.

B1d. Without Water Control and Without Mast Tree Planting

This alternative would involve construction of a dike in the same location as the previous alternative, but water levels in the MSMU would not be controlled. The MSMU would be inundated when the existing Mississippi River dike is overtopped (approximately 5 percent of the time during the growing season) or through gravity filling via the water control structure and would remain inundated until water levels drop naturally.

B2. Alignment 2 Alternatives

B2a. With Water Control and No Mast Tree Planting - Preferred Alternative

This alternative would involve construction of a low dike, with a top elevation of 594 feet, around the entire 50 acres of the existing cropland. Water levels inside of the MSMU would be controlled through the use of a well to pump water into the MSMU and a water control structure that would allow water to be released from the MSMU. Natural flooding, resulting from overtopping of the existing Mississippi River dike, is expected to inundate the unit less than 5 percent of the time during the growing season.

B2b. Without Water Control and No Mast Tree Planting

This alternative would involve construction of a dike in the same location as the previous alternative, but water levels in the MSMU would not be controlled. The MSMU would be inundated when the existing Mississippi River dike is overtopped (approximately 5 percent of the time during the growing season) or through gravity filling via the water control structure and would remain inundated until water levels drop naturally.

B3. Alignment 3 Alternatives

B3a. With Water Control and With Mast Tree Planting

This alternative would involve construction of a low dike, with a top elevation of 594 feet, around a 42-acre portion of existing cropland and 20 acres of existing bottomland hardwood forest. Water levels inside of the MSMU would be controlled through the use of a well to pump water into the MSMU and a water control structure that would allow water to be released from the MSMU. Natural flooding, resulting from overtopping of the existing Mississippi River dike, is expected to inundate the unit less than 5 percent of the time during the growing season. In addition, this alternative would include planting the remaining 7 acres of existing cropland to mast-producing trees. The tree planting area would not be included in the MSMU, as the dike would not encompass it.

B3b. Without Water Control and With Mast Tree Planting

This alternative would involve construction of a dike in the same location as the previous alternative, but water levels in the MSMU would not be controlled. The MSMU would be inundated when the existing Mississippi River dike is overtopped (approximately 5 percent of the time during the growing season) or through gravity filling via the water control structure and would remain inundated until water levels drop naturally. In addition, this alternative would include planting the remaining 7 acres of existing cropland to mast-producing trees. The tree planting area would not be included in the MSMU as the dike would not encompass it.

B3c. Without water control and Without Mast Tree Planting

This alternative would involve construction of a dike in the same location as the previous alternative, water levels in the MSMU would not be controlled, and there would be no tree planting. The MSMU would be inundated when the existing Mississippi River dike is overtopped (approximately 5 percent of the time during the growing season) or through gravity filling via the water control structure and would remain inundated until water levels drop naturally.

B3d. With Water Control and Without Mast Tree Planting

This alternative would involve construction of a dike in the same location as the previous alternatives. Water levels inside of the MSMU would be controlled through the use of a well to pump water into the MSMU and a water control structure that would allow water to be released

from the MSMU. Natural flooding, resulting from overtopping of the existing Mississippi River dike, is expected to inundate the unit less than 5 percent of the time during the growing season. This alternative would not include planting the remaining 7 acres of existing cropland to mast-producing trees.

B4. Alignment 4 Alternatives

B4a. With Water Control and No Mast Tree Planting

This is the preferred alternative. This alternative would involve construction of a low dike, with a top elevation of 594 feet, around the entire 50 acres of existing cropland and 20 acres of existing bottomland hardwood forest. Water levels inside of the MSMU would be controlled through the use of a well to pump water into the MSMU and a water control structure that would allow water to be released from the MSMU. Natural flooding, resulting from overtopping of the existing Mississippi River dike, is expected to inundate the unit less than 5 percent of the time during the growing season.

B4b. Without Water Control and No Mast Tree Planting

This alternative would involve construction of a dike in the same location as the previous alternative, but water levels in the MSMU would not be controlled. The MSMU would be inundated when the existing Mississippi River dike is overtopped (approximately 5 percent of the time during the growing season) or through gravity filling via the water control structure and would remain inundated until water levels drop naturally.

C. Shoreline Protection

This feature consists of repairing 1,500 lineal feet of Mississippi River shoreline at River Mile 551.2 through the placement of revetment and bedding stone along the existing low level dike. It is anticipated that dredged material from an upstream cut would be placed in the appropriate areas to reclaim the eroded slope. Following placement of the mechanically dredged material, in this case sand, appropriate earth-moving equipment would be utilized to construct the desired 2.5H (horizontal):1V (vertical) slope. Approximately 9,600 tons of 400-pound top size would be placed as a 2.0-foot-thick layer with slopes no steeper than 2H (horizontal):1V (vertical) which may extend up to 50 feet into the river. Approximately 5,000 tons of bedding stone would be placed in a 9-inch-thick layer beneath this stone. A minor amount (not to exceed 2 feet in depth) of soil may be excavated at the top of the existing dike in order to tie in the fill material and rock protection. All erosion protection and bedding stone would be inert and uncontaminated rock obtained from approved sources.

D. Trash Rack

A trash rack would be constructed to prevent debris from entering outlet structures #2 and #5 along Harris Slough. It would be constructed from hot-rolled steel H piles designated as "HP8X36." It is estimated that 9 piles on 18-inch centers would be needed. The piles would be placed in Harris Slough on a 5-foot radius from the outlet of the corrugated metal pipes (CMPs). All piles would be driven to an approximate depth of 15 feet below the slough bottom. The piles would extend to an elevation of 594.7 feet, which is approximately 7 feet above normal water surface elevation. The piles would be driven using a crane-mounted pile hammer. The crane would be stationed on the existing levee. The total length per pile would be approximately 25 feet.

Currently, the sponsor (USFWS) regularly performs debris removal for the existing CMPs. However, the maintenance of debris removal from the trash rack is expected to be less than for that of the CMPs. This would lead to an overall reduction in maintenance.

IV. AFFECTED ENVIRONMENT.

The topography of Pleasant Creek is primarily a low, relatively flat floodplain landscape that is characterized by a mosaic of backwater lakes, sloughs, and bottomland hardwood forest. Examination of the National Wetland Inventory (NWI) maps of the project area indicate that most of the present acreage of Pleasant Creek is classified as palustrine forest (PFO) and is comprised of nearly level, well drained to poorly drained soils formed in silty alluvial sediment.

Additional discussion of aquatic and water quality impacts is contained in Appendix A - Clean Water Act, Section 404(b)(1) Evaluation.

Bottomland hardwood forest represents the largest single land cover type in the Pleasant Creek area (approximately 1,740 acres). Dominant species include silver maple and green ash. Other species found in the area are cottonwood, pin oak, bur oak, and pecan. A majority of the forested area is composed of pole size to sawlog size material with limited reproduction. Willows and silver maples have invaded the lower elevation areas.

A large variety of birds utilize the project area during some part of their annual life cycles. At least 16 species of birds have been observed in Pleasant Creek. Waterfowl species are perhaps the most easily recognized due to their high visibility as well as their recreational and economic value. A mean total of 60,845 ducks was observed during annual USFWS aerial surveys in the project area during the period of September 28, 1998 - December 14, 1998. The project area also provides important foraging habitat for wading birds such as herons and egrets. There is a large heron rookery within the Pleasant Creek complex.

Pleasant Creek provides habitat for a number of mammal species as well. Game and furbearing mammals significant to the study area include squirrel, rabbit, woodchuck, white-tailed deer, muskrat, raccoon, opossum, skunk, red fox, coyote, and beaver.

The backwater lakes, found in Pleasant Creek, are sustained primarily by groundwater seepage as well as overflow from the Mississippi River. Fish species found in this area are largemouth bass, bluegill, freshwater drum, and white bass. Frogs, turtles, and other invertebrates may utilize the backwater lakes as well, basking, foraging, and hiding from predators in and among the emergent vegetation. A heron rookery is located near the project area. Herons may forage for fish in the shallow waters of the backwater lakes and perch on fallen trees.

Hazardous, Toxic, and Radioactive Waste. A hazardous, toxic, and radioactive waste (HTRW) compliance assessment was conducted. The Pleasant Creek EMP involves work on land which has historically been used for agricultural purposes, and not for any known or suspected industrial purposes. Within the project area, only the northern tip is believed to pose any potential HTRW concern.

A review of the data indicates that there is a serious, however unlikely, potential for HTRW contamination within the proposed project area. Early 20th century Savanna Army Depot ordnance-related activity resulted in an artillery impact fan over 7,000 acres in size that may contain up to 10 live, fused 155mm or 75mm rounds. This artillery impact fan intersects 8 acres

of the Pleasant Creek EMP on its northernmost tip. Despite the unlikely chance of unexploded ordnance existing in this area, the threat is sufficient to warrant the implementation of a site safety plan that specifically requires UXO safety personnel to be on-site during activities within the firing fan. There are no obvious indications of potential contamination sources or migration pathways from surrounding areas. Appendix C contains a copy of the full HTRW documentation.

V. ENVIRONMENTAL IMPACTS OF THE PREFERRED ALTERNATIVE.

See Appendix D for the complete Habitat Evaluation Report.

A. Natural Resources. Effects of the project on natural resources were evaluated using Wildlife Habitat Appraisal Guide (WHAG) methodologies. These habitat evaluation methods were used during project planning to evaluate various features in terms of increased benefits to wildlife resources. Optimization of habitat units (HUs) in relation to project costs for target species is considered the goal of feature selection. Assessment of project impacts also was based on experience and sound management practices.

The results clearly show that the alternatives including water control have more of a positive effect on HU changes than without water control. However, there appears to be little difference between Alignments 1 and 2. HUs are calculated by taking the Habitat Suitability Index and multiplying it by the acreage. Although some individuals compare HUs between projects, the tool is not intended for that use. Please do not attempt to compare the amount of HUs created by this project to other projects—only compare within alternatives in this project.

The mallard and Canada goose models in the WHAG are to evaluate migratory waterfowl habitat. Originally, a diving duck model was used because it might display potential migratory benefits for diving ducks. However, this assumption appeared to be wrong and that model was dropped. The American coot model is assumed to include some of the same requirements for diving ducks and is included in the evaluation.

Due to the existing habitat quality and wetland habitat in the complex, the existing crop field appears to have considerable value for these species. Existing HSI for mallard is 0.57 and goose 0.52. The HSI with water control for Alignment 1 is 0.58 and Alignment 2 is 0.62. Canada goose showed a larger increase to 0.71. In all cases, the habitat suitability and HUs for great blue heron increased. The only decrease seen with water control was Alignment 2 with water control where changes to the forest occurred, affecting green-backed heron HSI.

Operation of the project to meet the management objectives of Pleasant Creek Wildlife Area is expected to positively affect natural floodplain values. Because the water control dike would provide only a low level of flood protection, no measurable change in floodplain storage is anticipated, and no change in flood heights is expected to result from this action. The project is expected to have a positive effect on wetland wildlife habitat. No loss of existing wetland functions or values is expected to occur due to the fact that the project involves the conversion of an agricultural field into a moist soil unit.

B. Historic and Cultural Resources. The Pleasant Creek project has no historic properties listed on or eligible for inclusion in the National Register of Historic Places. The Corps' initial coordination letter (Appendix E) under Section 106 of the National Historic Preservation Act, dated August 4, 1999, received no responses. Appendix E also includes the Corps letter dated December 8, 1999, and the only response to that letter [the Iowa State Historic

Preservation Office (SHPO) letter (R&C#: 990849046) dated January 4, 2000]. The Iowa SHPO concurred with the Corps' determination of "No Historic Properties Affected provided that the proposed undertaking will avoid and have no impact on 13JK245." The project will have no impact on 13JK245, which is outside the "Area of Potential Effects" as defined at 36 CFR 800.16(d). These letters document completion of coordination under Section 106 of the National Historic Preservation Act (NHPA/Public Law 89-665).

If the scope of the project should change, or if there are any post-review discoveries of any items of archaeological, historical, or architectural interest, the Corps will ensure that reasonable efforts are taken to avoid or minimize harm to the property until its significance can be determined under the procedures at 36 CFR 800.13(b and c).

In addition, if the execution of the project should uncover human remains or objects covered under the Native American Graves Protection and Repatriation Act (NAGPRA/Public Law 101-601), the Corps will ensure that all provisions of NAGPRA are observed, including notifying the Office of the State Archaeologist of Iowa when human remains are first encountered, establishing a written procedure for dealing with the remains, and reburial of all human remains and grave-associated artifacts according to procedures provided for under NAGPRA and the Iowa Burial Code (305A.7).

C. Made Resources. Manmade resources found in Pleasant Creek include: the perimeter levee, subsequent road, existing spillways, stoplog structures, and culvert. No adverse impacts to these structures are anticipated.

D. Endangered Species. To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, the Corps coordinated with the U.S. Fish and Wildlife Service (USFWS). The USFWS identified the following federally threatened and endangered species known to occur in Jackson County, Iowa:

Status	Common Name	Scientific Name
T	Bald eagle	<i>Haliaeetus leucocephalus</i>
T	Eastern prairie fringed orchid	<i>Platanthera leucophaea</i>
E	Higgins' eye pearly mussel	<i>Lampsilis higginsii</i>
E	Iowa Pleistocene snail	<i>Discus macclintockii</i>
T	Northern monkshood	<i>Aconitum novaboracense</i>

T = threatened
E = endangered

Bald eagles use the Mississippi River corridor area near Pleasant Creek as a migratory route, as well as a nesting area. There is one known active eagle nest within the Pleasant Creek complex. The majority of eagles concentrate during winter at Lock and Dam 12, just upstream at Bellevue, Iowa. Higgins' eye pearly mussels usually inhabit coarse gravel, cobble substrate. Because of the dominance of sand and silty materials in the project area, this species is not likely to occur here. The Northern monkshood has been documented in Jackson County. The habitat requirements of this plant may be present in the bluffs located adjacent to the project site. The Iowa Pleistocene snail is also known to occur in Jackson County. Suitable habitats for this species are primarily algal, talus slopes, which are developed over the entrances to small fissures and caves. This habitat type may be present in the bluff area located adjacent to the project site. The Eastern

prairie-fringed orchid is known to occur in Jackson County. Suitable habitat for this species is primarily prairie. This habitat type is not present in the project area.

An additional species of concern that the State of Iowa has identified is the river otter (*Lutra canadensis*) as threatened in Iowa and is likely to be found in the area. A great blue heron (*Ardea herodias*) rookery is located in the Pleasant Creek complex. There are no anticipated adverse effects to otters or herons in the project area.

TABLE EA-1 Impacts of the Preferred Alternative on Natural Resources and Historic Properties		
Type of Resource	Authority	Assessment of Effects
Air quality	Clean Air Act, as amended (42 U.S.C. 7401, <i>et seq.</i>)	No effect
Threatened or endangered species	Endangered Species Act of 1973, as amended (16 U.S.C. 1531, <i>et seq.</i>)	No effect
Fish and wildlife	Fish and Wildlife Coordination Act (16 U.S.C. 661, <i>et seq.</i>)	No adverse effect
Floodplains	Executive Order 11988, Floodplain Management	No effect
Historic and cultural resources	National Historic Preservation Act of 1966, as amended (16 U.S.C. 470, <i>et seq.</i>)	No effect
Prime or unique farmland	Council on Environmental Quality Memorandum of August 11, 1980: Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act	No effect
Water quality	Clean Water Act of 1977, as amended (33 U.S.C. 1251, <i>et seq.</i>)	No negative effect
Wetlands	Executive Order 11990, Protection of Wetlands; Clean Water Act of 1977, as amended (33 U.S.C. 1251, <i>et seq.</i>)	No effect
Wild and scenic rivers	Wild and Scenic Rivers Act, as amended (16 U.S.C. 1271, <i>et seq.</i>)	Not present in planning area

VI. ENVIRONMENTAL IMPACTS OF THE NON-PREFERRED ALTERNATIVES.

The alternatives were evaluated via HEP/WHAG methodologies and Incremental Analysis. The non-preferred alternatives were not selected due to low environmental benefits compared to project costs. With the exception of No Action, the non-preferred alternatives would have provided differing degrees of moist-soil habitat but would not have accomplished the objectives of the USFWS. The preferred alternative provided the most habitat for the project cost.

- A. No Action Alternative
- B. Alignment Alternatives
 - B1. Alignment Alternatives
 - B1a. With Water Control and With Mast Tree Planting
 - B1b. Without Water Control and With Mast Tree Planting
 - B1c. With Water Control and Without Mast Tree Planting
 - B1d. Without Water Control and Without Mast Tree Planting
 - B2. Alignment 2 Alternatives
 - B2b. Without Water Control and No Mast Tree Planting
 - B3. Alignment 3 Alternatives
 - B3a. With Water Control and With Mast Tree Planting
 - B3b. Without Water Control and With Mast Tree Planting

- B3c. Without Water Control and Without Mast Tree Planting
- B3d. With Water Control and Without Mast Tree Planting
- B4. Alignment 4 Alternatives
 - B4a. With Water Control and No Mast Tree Planting
 - B4b. Without Water Control and No Mast Tree Planting

VII. COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES.

Tabular summation of compliance can be found in Table EA-2.

A. Archeological and Historic Preservation Act and National Historic Preservation Act. As required under Section 106 of the National Historic Preservation Act of 1996 (NHPA), as amended, the Corps has coordinated with the Iowa State Historic Preservation Office, and they have determined that the project would not impact any significant historic architectural or archeological resources.

B. Clean Air Act. No aspect of the proposed project has been identified as having the potential to violate air quality standards. The local environment would not be exposed to contaminants in quantity and duration that tend to be detrimental to its flora, fauna, human population or property, or which would unreasonably interfere with the quality of life. The proposed project is in full compliance with this act.

C. Clean Water Act (Sections 401 and 404 as amended). Due to the length of the bankline protection, a Section 404(b)(1) Evaluation and Section 401 Water Quality Certification for this project will be required.

D. Endangered Species Act. The proposed action has been coordinated with the U.S. Fish and Wildlife Service and the Iowa Department of Natural Resources. It was determined that this action would have no adverse impacts to endangered species.

E. Farmland Protection Act. The proposed action would not result in the conversion of any prime, unique, or state or locally important farmland to nonagricultural uses.

F. Federal Water Project Recreation Act. The project would provide mid-migration waterfowl habitat and food reserves that would aid the migrating waterfowl. Recreation associated with positive waterfowl habitat benefits would be enhanced by this project.

G. Fish and Wildlife Coordination Act. Conservation of fish and wildlife is the goal of the EMP HREP program.

H. National Environmental Policy Act. The coordination of this Environmental Assessment complies with the National Environmental Policy Act requirements.

I. Wild and Scenic Rivers Act. This section of the Mississippi River is not listed in the National Rivers Inventory and is not a component of the National Wild and Scenic Rivers Systems.

J. Flood Plain Management - Executive Order 11988. Implementation of the Preferred Alternative is not considered development and would not alter floodplain management.

K. Protection of Wetlands - Executive Order 11990. This site is classified as a wetland and the project is designed to enhance the aquatic area.

TABLE EA-2

Relationship of Plans to Environmental Protection Statutes and Other Environmental Requirements

<u>Federal Policies</u>	<u>Compliance</u>
Archaeological and Historic Preservation Act, 16 U.S.C. 469, et seq.	Full compliance
Clean Air Act, 42 U.S.C. 1857h-7, et seq.	Full compliance
Clean Water Act, 33 U.S.C. 1251, et seq.	Full compliance
Endangered Species Act, 16 U.S.C. 1531, et seq.	Full compliance
Federal Water Project Recreation Act, 16 U.S.C. 460-1(12), et seq.	Full compliance
Fish and Wildlife Coordination Act, 16 U.S.C. 601, et seq.	Full compliance
Land and Water Conservation Fund Act, 16 U.S.C. 460/-460/-11, et seq.	Not applicable
National Environmental Policy Act, 42 U.S.C. 4321, et seq.	Full compliance
National Historic Preservation Act, 16 U.S.C. 470a, et seq.	Full compliance
Rivers and Harbors Act, 33 U.S.C. 403, et seq.	Full compliance
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et seq.	Not applicable
Wild and Scenic Rivers Act, 16 U.S.C. 1271, et seq.	Full compliance
Flood Plain Management (Executive Order 11988)	Full compliance
Protection of Wetlands (Executive Order 11990)	Full compliance
Farmland Protection Act	Full compliance
Analysis of Impacts on Prime and Unique Farmland (CEQ Memorandum, 11 Aug 80)	Full compliance

NOTES:

- a. Full compliance. Having met all requirements of the statute for the current stage of planning.
- b. Partial compliance. Not having met some of the requirements that normally are met in the current stage of planning.
- c. Non-compliance. Violation of a requirement of the statute.
- d. Not applicable. No requirements for the statute required.

VIII. RELATIONSHIP BETWEEN SHORT-TERM USE AND LONG-TERM PRODUCTIVITY.

A short-term disruption to area wildlife is unavoidable during construction. Long-term productivity would be enhanced as water level management and seeding programs are implemented. The project modification would provide better quality habitat for aquatic and terrestrial resident and migratory species. Overall habitat diversity would be increased and both game and non-game species would benefit. Consumptive off-site recreational use in the vicinity of the Pleasant Creek Wildlife Area would realize heightened opportunities.

IX. IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES IF PROJECT IS IMPLEMENTED.

Other than fuel, construction materials, and human labor, none of the proposed actions are considered irreversible.

X. ECONOMIC AND SOCIAL IMPACTS OF THE PROPOSED ACTION.

A. Community and Regional Growth. No impacts to the growth of the community or region would be realized as a result of the project.

B. Community Cohesion. There would be no impacts to community cohesion. No public opposition to the enhancement measures has been expressed, nor is any expected.

C. Displacement of People. No residential displacements would be caused by the proposed habitat rehabilitation and enhancement project.

D. Property Values and Tax Revenues. The Pleasant Creek Wildlife Area is located on Federal land. No change in property values or tax revenues would occur.

E. Public Facilities and Services. The proposed project would positively impact public facilities and services by increasing overall habitat diversity, resulting in heightened opportunities for recreational use of the Pleasant Creek Wildlife Area.

F. Life, Health, and Safety. There would be no impacts to life, health, or safety.

G. Business and Industrial Growth. No long-term impacts to business or industrial activity would result from the proposed project.

H. Employment and Labor Force. No significant impacts on employment or labor force in the project vicinity would occur.

I. Farm Displacement. Approximately 50 acres of cropland would be converted to a combination of moist soil unit and mast-dominated forest habitat. This acreage is on land leased from the Federal Government. No farms or farmsteads would be displaced. No prime and unique farmland would be impacted.

J. Aesthetics. The clearing of some woody vegetation would occur as a result of construction activities. Following construction, the area would be reseeded. No permanent adverse impacts to area aesthetics are anticipated.

K. Noise Levels. Heavy machinery would generate an increase in noise during project construction and temporarily disturb wildlife and recreationists in the area. No long-term impacts would result.

XI. RELATIONSHIP TO LAND-USE PLANS.

The project is located on federally owned land and would not result in the conversion of existing land-use plans, as zoned in the 1989 Land Use Allocation Plan (LUAP). The project would not result in any significant change in floodplain storage.

XII. CONCLUSIONS.

The habitat value of Pleasant Creek Wildlife Area is not being fully realized due to frequent summer/fall flooding events that reduce food production and subsequent use by migrating birds.

The recommended project features (perimeter dike, pump station, and water control structure, shoreline protection, and trash rack) are designed to meet the project's goal of enhancing wetland, terrestrial, and aquatic habitat by increasing the success ratio of moist soil/emergent vegetation, and increasing food, shelter, and cover for migrating birds, terrestrial birds, mammals and other wildlife.

This project is consistent with and fully supports the overall goal and objectives of the UMRS-EMP and the North American Waterfowl Management Plan.

XIII. COORDINATION.

Coordination has been made throughout the planning and design process with the following State and Federal agencies:

U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency
Federal Emergency Management Agency
Iowa Department of Natural Resources
State Historical Society of Iowa

In general, the various agencies support the proposed project, as it would enhance the wildlife habitat of the proposed area.

Appendix E - Pertinent Correspondence contains letters of comment regarding the proposed project.

LITERATURE CITED.

Frederickson, L. H., and T. S. Taylor. 1982. Management of seasonally flooded impoundments for wildlife. U.S. Fish and Wildlife Service Res. Pub. 148 pp.

Havera, S. P. 1999. Waterfowl of Illinois: Status and Management. Illinois Natural History Survey Special Publication 21. 672 pp.

FINDING OF NO SIGNIFICANT IMPACT

**UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT PROGRAM
HABITAT REHABILITATION AND ENHANCEMENT PROJECT**

**PLEASANT CREEK WILDLIFE AREA
POOL 13, MISSISSIPPI RIVER MILES 548.7 THROUGH 552.8
JACKSON COUNTY, IOWA**

I have reviewed the information provided by this Environmental Assessment, along with data obtained from cooperating Federal, State, and local agencies. The preferred alternative involves constructing a pump station and facilities that will supply water to the refuge lake. Based on this review, I find that the proposed project will not significantly affect the quality of the environment. Therefore, it is my determination that an Environmental Impact Statement (EIS) is not required. This determination will be reevaluated if warranted by later developments.

Alternatives considered along with the preferred alternative were:

- No action;
- Several alignment alternatives that include variations in water control and mast tree planting components;
- Shoreline protection; and
- Trash rack construction

Factors considered in making a determination that an EIS was not required are as follows:

- All agencies responding to the District's coordination letter indicated that the project would result in no significant impacts to the resources under their jurisdictions;
- No significant adverse social, economic, environmental or cultural impacts are anticipated as a result of this action. No endangered species, either State or Federal, will be adversely affected by the proposed action; and
- Implementation of the proposed project will benefit area wildlife resources.

(Date)

William J. Bayles
Colonel, U.S. Army
District Engineer