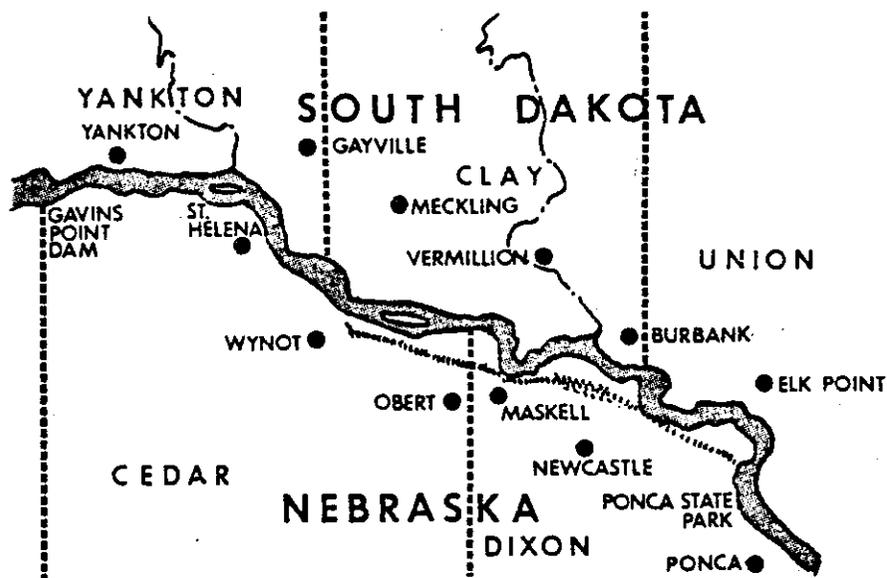


FINAL
ENVIRONMENTAL ASSESSMENT
FOR ENDANGERED SPECIES HABITAT IMPROVEMENT/CREATION
IN THE MISSOURI RIVER BETWEEN THE
NIOBRARA RIVER AND PONCA, NEBRASKA

SPRING 1994 ACTIVITIES



US Army Corps
of Engineers
Omaha District

**FINDING OF NO SIGNIFICANT IMPACT
ENDANGERED SPECIES HABITAT IMPROVEMENT/CREATION
IN THE MISSOURI RIVER BETWEEN THE
NIOBRARA RIVER AND PONCA, NEBRASKA**

SPRING 1994 ACTIVITIES

An environmental assessment has been prepared for new habitat development in upper Lewis and Clark Lake and the Missouri River below Gavins Point Dam. The actions described are in response to the November 1990, U.S. Fish and Wildlife Service Biological Opinion on the operation of the Missouri River Main Stem System, and will provide safer nesting habitat for the interior least tern (endangered species) and the piping plover (threatened species).

Vegetation on the river islands will be removed and maintained in the "sparsely vegetated" state needed for nesting habitat for the terns and plovers. After vegetation removal, the islands will be "capped" with up to two feet of local sand. In addition, 10 new islands will be constructed by dredging in the upper end of Lewis and Clark Lake.

The adverse impacts of these actions are all temporary and localized, consisting of minor noise and exhaust from bulldozers and dredging equipment during the construction period. Equipment operators will be briefed on potential archeological sites (steamboat wrecks) in the river, and written guidance will be provided to them. If potential wrecks are found, work will cease on that site until surveyed and cleared by an archeologist.

Factors that were considered in making this decision included but were not necessarily limited to conservation, economics, esthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use, air and water quality, energy needs, safety, food production, and in general the needs and welfare of the people.

It is my finding that the Federal action would not have significant adverse impacts on the quality of the human environment, and therefore an environmental impact statement will not be prepared.

30 March 1994

Date

Michael S. Meuleners

Michael S. Meuleners
Colonel, Corps of Engineers
District Engineer

FINAL
ENVIRONMENTAL ASSESSMENT
FOR ENDANGERED SPECIES HABITAT IMPROVEMENT/CREATION
IN THE MISSOURI RIVER BETWEEN THE
NIORARA RIVER AND PONCA, NEBRASKA

SPRING 1994 ACTIVITIES

INTRODUCTION

The interior least tern (*Sterna antillarum*) and the piping plover (*Charadrius melodus*) are federally endangered and threatened species, respectively, which nest on sandbars in the Missouri River and along reservoir shorelines. The riverine nesting habitat has been decreasing in past years, at least in part due to vegetative encroachment. Vegetation is no longer regularly scoured from river sandbars by heavy spring flows and/or ice, primarily because flows are regulated by the main stem dams. Channel degradation may also contribute to increased island vegetation by allowing more of the historically flooded areas to dry out and allow seedling development. New sandbar creation is uncommon because the river carries less sediment and is no longer meandering along much of its course. Bank erosion still continues to supply sediment along "natural" segments of the Missouri River; however, the reservoirs collect essentially all of the incoming sediment, so little passes on to the river downstream from the dams. The combination of vegetation encroachment and reduced island formation result in less suitable nesting habitat for these two bird species.

Along some of the reservoirs on the Missouri River, drought conditions between 1987 and 1992 resulted in lower water elevations and temporarily exposed shoreline suitable for nesting. Many of these areas are now under water due to the rainfall events in 1993 returning reservoir elevations to normal levels.

BACKGROUND

The Missouri River, in its natural state, was a meandering, dynamic river that continually eroded and deposited sediment, creating and destroying islands and sandbars. Sandbars and islands would be scoured of vegetation by heavy spring runoffs and winter ice flows. Channelization was initiated in the early 1900's with the Missouri River Bank Stabilization and Navigation Project, a 6-foot deep channel from Kansas City downstream to the mouth. Authorization for additional channelization upstream followed, as well as construction of six main stem dams. The last dam to close was Big Bend in 1963.

In 1985, the interior least tern (tern) was listed as an endangered species and the piping plover (plover) was listed as a threatened species in the Great Plains. The Missouri River Division (MRD) of the Corps initiated informal consultation soon after the birds were listed based on the effects of Missouri River system regulations on the species and their habitat. During the 1986 breeding season, MRD, the U.S. Fish and Wildlife (Service), and South Dakota Game, Fish, and Parks began gathering population and habitat data for the two species. In March 1986, the Service requested that the Corps enter into formal Section 7 consultation; the Corps responded by requesting formal consultation in April. Also in 1986, the MRD Reservoir Control Center (RCC) began constraining system releases and implementing and evaluating techniques to protect the birds. By the fall of 1987, sufficient data had been gathered to allow MRD to prepare a Biological Assessment, which was submitted to the Service in October. The Biological Assessment concluded that the operations of the main stem system would not affect the bald eagle or the peregrine falcon, but that terns and plovers may be affected. That assessment was supplemented by additional data which was sent to the Service in January 1989. Based on the Biological Assessment and the supplemental data, the Service issued a Biological Opinion (Opinion) in November 1990.

The Opinion stated that operations would not likely jeopardize the northern states population of the bald eagle. Conservation recommendations were made to the Corps for the bald eagle. The Opinion also concluded that the operation of the main stem system would jeopardize the continued existence of the interior least tern and piping plover. The Opinion describes Reasonable and Prudent Alternatives, Conservation, Recommendations, and Reasonable and Prudent Measures for implementation in order to remove or alleviate the jeopardy opinion rendered by the Service. The Fiscal Year (FY) 1992 Implementation Plan describing all proposed Corps' activities for terns and plovers prior to 1 October 1992, was then sent to the Service.

The Omaha District's Fiscal Year 1993-Fiscal Year 1995 Plan for Habitat Improvement for the Interior Least Tern and Piping Plover was finalized in May 1993. This plan is "Phase 1" of an incremental approach to a long-term plan (10 years), in which activities suggested in the Opinion will be implemented and monitored for success for several years, then the "best" methods from those years will continue on into the next phase of the plan. The ultimate goal of these actions is to increase fledge ratios and adult populations for interior least terns and piping plovers.

The MRD is presently in formal Section 7 consultation on the Corps' Master Manual for operations for the Missouri River Main Stem System. The Opinion issued by the

Service and this environmental assessment (EA) which addresses the implementation of the recommendations contained in that Opinion will remain in effect until a new Opinion is issued. The Corps will continue to implement the recommendations of the existing Opinion in order to avoid jeopardizing the continued existence of the two birds under current operations.

PROPOSED FEDERAL ACTIONS

The following new work is planned in the project area for the spring of 1994. Overview maps of the areas, as well as the locations of proposed habitat work, can be found in Appendix A. A larger-scaled photo mosaic map booklet is included as an enclosure to the draft EA to assist private landowners and interested parties in locating the sites for proposed habitat work. This will not be included in the final EA, as the final EA will utilize the same mailing list as the draft EA. Site locations below Gavins Point Dam are referenced by alpha characters for simplicity. Site locations between the Niobrara River and Lewis and Clark Lake are referenced numerically. Maintenance of habitat work completed in previous years is not discussed here because it was evaluated in previous EA's (Corps of Engineers, 1993a; Corps of Engineers 1993b).

Extreme upstream end of Lewis and Clark Lake

Within the general region between River Mile (RM) 835 and RM 830, 10 low-elevation island sites will be chosen for dredge nourishment this spring, raising the elevation of each site by at least two feet above present levels (which will be at least one foot above peak summer elevations).

Missouri River between Gavins Point Dam and Ponca, Nebraska

Twenty sites have been selected as candidates for habitat development activities this spring (see maps, Appendix A). The general plan for each site is to mechanically remove the vegetation that has a dbh (diameter at breast height, approximately 4 feet above the ground) of less than 4 inches. Vegetation removal can be accomplished using brush hogs, chain saws, bulldozers, etc. Once the vegetation is levelled, it will be removed from the island so as not to provide denning structure for predators. Removal may be accomplished by burning, chipping into the river, or physical transport of the dead vegetation from the island. The surface of the cleared island area will then be "capped" by up to 2 feet of local sand (pushed by bulldozers) or sand slurry (dredged from adjacent river substrate) in order to provide a smooth, sparsely vegetated nesting area for the birds. Shoreline Erosion Arrestor (S.E.A.)

bags will be used on the upstream and channel sides of islands, if needed, to prevent erosion. S.E.A. bags have been utilized in the past to prevent erosion on nesting islands. They are hydraulically filled with local sand slurry pumped from the river using an irrigation pump. Specifics on S.E.A. bags can be found in Appendix B.

Transportation of heavy equipment to the islands will be provided by the South Dakota Army National Guard (SDANG) between 11 and 15 April. The SDANG has floating bridge units that facilitate access to the islands, as well as equipment transfer between islands. If sufficient bridging equipment and bulldozers are available, many of the islands will be developed simultaneously, with equipment shuttled from finished islands to islands needing development as needed. Between April 18 and 28, transport of heavy equipment to the islands will be by private barge.

EXISTING ISLAND CONDITIONS

Extreme upstream end of Lewis and Clark Lake

Island sites 1-10 are presently very low elevation islands that are under water during most of the year. The substrate is unvegetated sand to sand-silt mixture.

Wildlife use of the site areas may consist of incidental use by fish and amphibians. There are no special characteristics (aquatic vegetation, rocky crevasses, gravelly substrate, etc.) to encourage use by aquatic organisms.

Missouri River between Gavins Point Dam and Ponca, Nebraska

Island sites A-T are presently high elevation, vegetated islands that were historically available for tern and plover nesting, but due to vegetation encroachment no longer provide nesting habitat. Presently, island sizes range from 1.3 acres (site G) to 49 acres (site I), with the approximate scale incorporated on the photo mosaic maps. Finished, high elevation acreage will be about half the present acreage, as local sand will most likely be bulldozed up on top of the vegetation removal area to "cap" the islands.

Vegetation on the islands consists primarily of eastern cottonwood (Populus deltoides), sandbar willow (Salix interior), common reedgrass (Phragmites australis), reed canary grass (Phalaris arundinacea), bulrush (Scirpus spp.), white sweetclover (Melilotus alba), yellow sweetclover (M. officinalis), yellow nutsedge (Juncus natalia), cocklebur (Xanthium spp.), cattail (Typha spp.), wild sunflower (Helianthus annulus),

and russian thistle (Salsola iberica). The tree species consist of seedlings and saplings with a dbh of less than 4 inches.

Resident wildlife on the islands consists of toad (Bufo spp.), Plains garter snake (Thamnophis radix), red-sided garter snake (T. sirtalis parietalis), snapping turtle (Chelydra serpentina), western painted turtle (Chrysemys picta bellii), and smooth softshell turtle (Apalone mutica) populations, as well as small mammals such as voles (Microtus spp.). Grasshopper sparrows (Ammodramus savannarum), swamp sparrows (Melospiza georgiana), spotted sandpipers (Actitis macularia), ring-necked pheasant (Phasianus colchicus), and a few Canada geese (Branta canadensis) utilize the islands for nesting. There is occasional use by whitetail deer (Odocoileus virginianus), beaver (Castor canadensis), muskrat (Ondatra zibethica), raccoon (Procyon loter), and mink (Mustela vison). There is also seasonal wildlife use. Several duck and goose species utilize the islands while migrating, providing hunting opportunities for local residents. Bank swallows (Riparia riparia) and cliff swallows (Hirundo pyrrhonota) use the islands as staging areas. There has been evidence of opossum (Didelphis virginiana) and coyotes (Canis latrans) on the islands, although rare and infrequent.

Island areas selected for tern and plover habitat development are at elevations that correspond with "flow windows" designated in the Opinion. These "flow windows" consist of discharge levels from Gavins Point Dam which result in a present-day lack of habitat. Island elevations of one to two feet above the water surface elevation during the upper range of the window, 38,500 cfs, are the highest islands that will be selected for tern and plover habitat work. Islands selected this spring fall into this category. Islands at this elevation and lower were routinely "scoured" of vegetation during natural hydrologic conditions, pre-dam. Even now, islands at this elevation have less than ten years' growth. Very high islands with established (more than ten years) riparian growth would have been historically flooded less often, and will not be utilized for tern and plover island development.

ENVIRONMENTAL EFFECTS OF PROPOSED ACTIONS

The following were considered during the environmental analysis process: air/water quality, biological resources, cultural resources, socioeconomic resources, land use/ownership, recreational use, and the effects on the National Wild and Scenic River System.

Cultural resources

Sandbar areas are continually changing due to the erosive nature of the river currents and wave action. Most of the low elevation islands are recently accreted and therefore would have little or no archeological significance. Vegetation removal is non-invasive and would not affect any potential archeological site beneath the islands. Use of bulldozed local sediments to cap the de-vegetated areas would be an invasive action and could affect cultural resources beneath the surface, if present. Use of dredged sediments would not affect potential cultural resources beneath the surface of the islands. Cultural resources personnel have been notified of the proposed actions and have indicated that there is potential for archeological artifacts (steamboat wrecks) at several locations in the Missouri River.

The historical record for steamboat wrecks (Chittendon, 1897) loosely links these locations to bends in the river (many of which no longer exist) and tributaries (which still exist). Therefore, the exact locations are not known, and it is likely that any wrecks would be so deeply buried in silt and sand that it would be highly unlikely that surface bulldozing (at maximum depths of 2 feet) would unearth any portion of a wreck. However, the remote possibility exists that some portion of a wreck could be scraped with bulldozing efforts, especially on sandbars near Yankton (two wrecks reported), near the mouth of the James River (one wreck), and near the mouth of the Vermillion River (two wrecks). If any wooden or metal fragment is unearthed in the process of bulldozing nesting islands, construction will stop, pending a determination of the most plausible origin of the fragment. A briefing has been written by Corps archeological staff (Appendix C) describing the type of debris that would be unearthed if a steamboat was located and the protocol for such a discovery. Coordination is under way between the Corps and the State Historical Preservation Officers (SHPO) in Nebraska and South Dakota. Letters of clearance from the SHPO's will be included as an appendix to the final EA.

Socioeconomic resources

The direct and indirect effects of the proposed activities on employment and community income are minimal due to the limited duration of the activities. Much of the work will be done by Corps personnel. Some of the clearing and capping work will be placed on open bid, if needed. The Corps is purchasing a small dredge for the creation of 10 small islands in the extreme upstream end of Lewis and Clark Lake. Land values will not be affected, nor will community growth, farmland, tax revenues, or public services and facilities.

Land use/ownership

Lands slated for habitat improvement are not developed, farmed, or grazed, and have no permanent buildings (although islands D and N have waterfowl blinds on them). The islands to be built in Lewis and Clark Lake are low elevation sandbar islands in the Missouri River and within the flood plain. All of these islands could potentially be under water during high river inflows upstream and/or high level discharges from upstream reservoirs. Island work below Gavins Point Dam will take place on older, higher elevation islands, and which will survive higher flows once capped.

In Nebraska, the landowner owns the islands adjacent to his property, so right-of-entry is necessary prior to habitat work. Some right-of-entry documents obtained during 1992 are still valid, but additional right-of-entry will need to be obtained prior to any work occurring on targeted islands.

In South Dakota, the state (South Dakota Game, Fish, and Parks) owns the islands in the Missouri River. Right-of-entry obtained in 1992 will still be valid for some areas, and will be obtained for the remaining areas.

The Corps owns the land within its project boundaries, including the site for the 10 islands in Lewis and Clark Lake.

Recreation

Recreational use of specific sandbar islands in the area is sporadic. During the fall and winter months, river islands are used for waterfowl hunting. Hunting activities should not be adversely affected by the proposed activities, as these actions occur at a different time of year. Construction of new permanent duck or goose blinds on islands slated for activity can be limited. During the summer months, river islands are used for picnicking, sand volleyball, sandbar golf, fishing, campfires, etc. Island areas used for tern and plover nesting are off-limits for recreational uses. This use restriction is permitted by both the Endangered Species Act and by the National Wild and Scenic Rivers Act [Public Law 90-542 (2 October 1968)]. Even within recreational rivers, public use can be regulated and distributed where necessary to protect and enhance the resource values of the river area.

Air/water quality

Exhaust from bulldozers, dredge equipment, and National Guard boats may minimally and temporarily increase the amount of suspended particles in the immediate vicinity of the bulldozing project downstream from Gavins Point Dam.

Regulatory requirements

Although the Corps is exempt from actual Section 404 (Clean Water Act) permitting, the bulldozing and dredging work must still be in compliance with the Act in Appendix D. The proposed project will be put on Public Notice prior to obtaining water quality certification from Nebraska Department of Environmental Quality and the South Dakota Department of Environment and Natural Resources. The Public Notice and certification letters are included in the Appendix D.

Under Section 402 of the Clean Water Act, also known as the National Pollution Discharge Elimination System (NPDES), any construction activity that disturbs more than five acres needs to develop an erosion control plan and obtain an NPDES permit. However, actions that are in compliance with Section 404 are exempted under Nebraska law (Nebraska Department of Environmental Quality, 1992) and under South Dakota law (South Dakota Department of Environment and Natural Resources, 1993). This is because discharge of sediments and slurries is also addressed in the Section 404 process.

Biological effects

Vegetation removal, bulldozing, and dredging activities will modify island topography to allow for higher unvegetated nesting areas for terns and plovers. Island areas in Lewis and Clark Lake slated for dredging are typically low in elevation, unvegetated (or sparsely vegetated with small pioneer plants), are inundated during peak summer flows, and have little potential for permanent animal residents. By increasing the elevation of these islands, wildlife (and vegetation) will have a greater chance of colonizing the islands, as the islands will no longer be inundated during the summer months. Vegetation maintenance will be necessary to maintain these islands in the sparsely vegetated state.

The higher elevation islands slated for work in the Missouri River below Gavins Point Dam will most likely lose nesting habitat for the grasshopper sparrow, the swamp sparrow, and the few Canada geese that utilize the islands for nesting purposes. Sufficient annual vegetation will remain for continued nesting by spotted sandpipers. Vegetative removal will result in reduced cover for transitory residents such as beaver, muskrat, raccoon, mink, pheasant, and whitetail deer. These animals most likely will relocate to other vegetated islands or riparian shoreline areas. Bulldozing activities may temporarily disrupt underground denning areas for voles, snakes, toads, and turtles. Vegetation maintenance will be necessary to maintain these islands, once cleared, in the sparsely vegetated state.

Although there are state threatened reptiles, such as the spiny softshell turtle (Apalone spinifera), the false map turtle (Gratemys pseudogeographica), and the eastern hognose snake (Heterodon platirhinos) that utilize sandy dunes and shorelines for habitat in South Dakota, none of these rare reptiles have ever been sighted on tern and plover nesting islands. Field personnel have been given photos of the above species, and none were sighted during the 1993 weekly monitoring activities on the islands. Habitat work will take place during March and April, therefore turtle nests will not yet be present. Any sighting of these rare reptiles will be reported to the Natural Heritage Foundation in South Dakota.

The desired biological effects of all actions are increased courtship, breeding, nesting, and chick rearing of terns and plovers on areas slated for habitat improvement.

National Wild and Scenic Rivers System

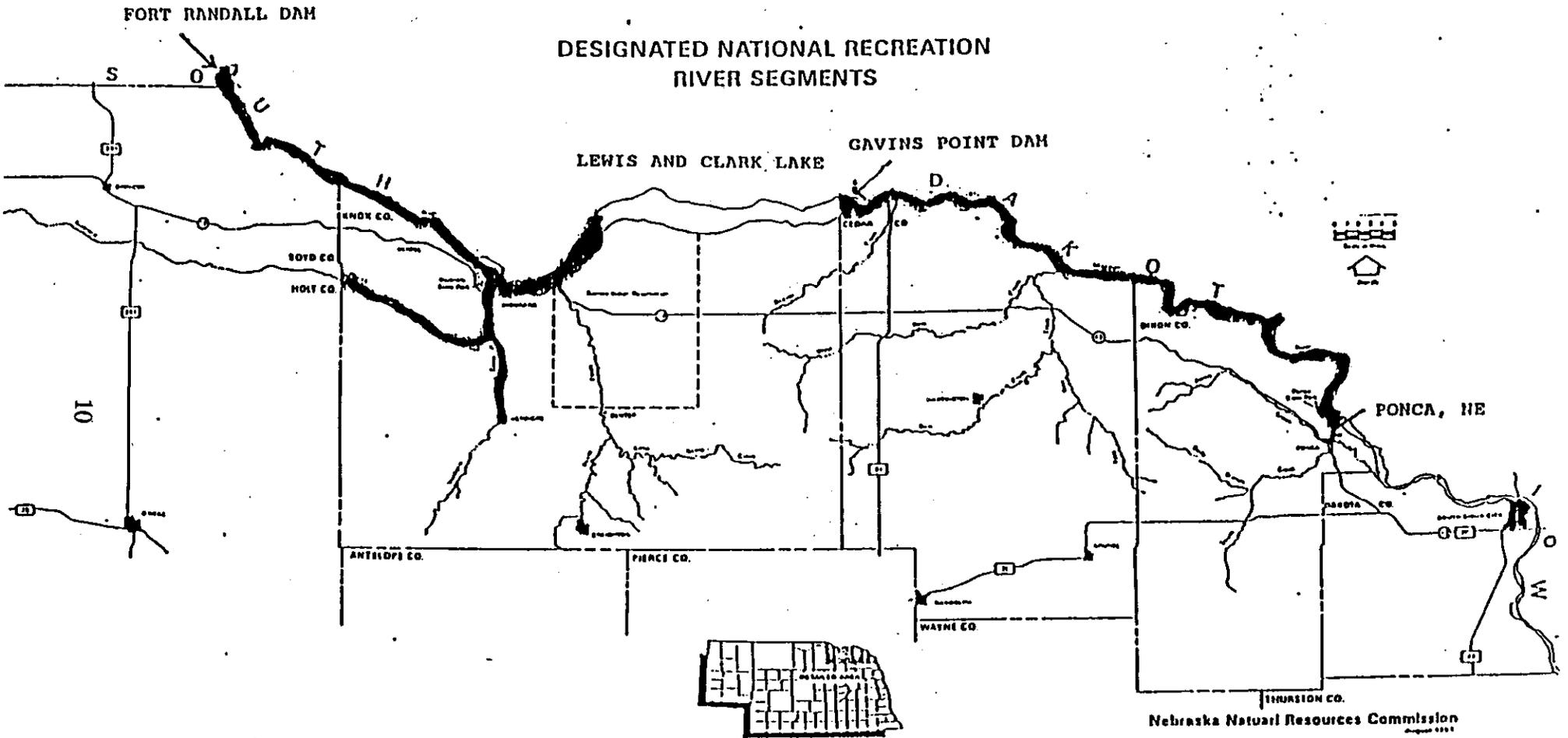
The National Wild and Scenic Rivers System includes sections of the Missouri River from Fort Randall Dam downstream to the headwaters of Lewis and Clark Lake, and from Gavins Point Dam downstream to Ponca State Park, Nebraska (Figure 1). The 58-mile Gavins Point Dam to Ponca stretch was designated as the Missouri National Recreational River (MNRR) in 1978 [Public Law 95-625 (10 November 1978)]. The 39-mile stretch from Fort Randall Dam to the headwaters of Lewis and Clark Lake, designated in 1991, is known as the 1991 Missouri Recreational River (91MoRR) [Public Law 102-50 (24 May 1991)]. Habitat improvement activities below Gavins Point Dam are within the boundaries of the MNRR.

The MNRR and 91MoRR were designated under the Wild and Scenic Rivers Act and thereby added to the National Wild and Scenic Rivers System (NWSRS). The purpose of designating a river under the Wild and Scenic Rivers Act is to protect its free-flowing characteristics and its significant scenic, recreational, fish, wildlife, geologic, historic, and cultural values. Some of these values have already been discussed. The impact of habitat maintenance and bulldozing activities to the remaining values is summarized below:

1. **Free-flowing character.** Vegetation removal, bulldozing, and dredging activities will not alter the free-flowing character of the Missouri River. Bulldozing and dredging will not add material to or subtract material from the river, only reshape existing islands using local sediments. Use of S.E.A. bags for island stabilization will, however, reduce natural erosion of the sandbar islands into the river. S.E.A. bags will only be used for erosion control purposes, not for entrainment of the channel.

FIGURE 1.

DESIGNATED NATIONAL RECREATION
RIVER SEGMENTS



2. **Scenery.** Vegetation removal may alter the scenery from vegetation-covered sandbars to sparsely-vegetated sandbars. Under "natural" conditions, sandbars would be in various stages of succession, including sparsely-vegetated. If S.E.A. bags are used for sandbar stabilization, they will also alter the scenery of the area. The bags are sand or buff colored and are not distracting to the eye. Additional sand has blown around bags placed in past years, and eventually the bags may become partially buried by new sand.

Bulldozing activities will alter the scenic view during the actual construction period (March - April). After construction is complete, the shaped mounds will weather similar to naturally contoured islands.

3. **Geologic.** Vegetation removal, bulldozing, and dredging activities will not alter the geologic components of the NWSRS.

4. **Historic.** Vegetation removal, bulldozing, and dredging activities will not alter either the natural or human historic components of the NWSRS. In fact, the purpose of the habitat work is to restore historic nesting areas for terns and plovers, preserving the natural heritage of the area.

5. **Cultural.** Vegetation removal, bulldozing, and dredging activities will not alter the cultural components of the NWSRS. Corps' cultural resources staff are coordinating with appropriate SHPO's on the proposed habitat development. Bulldozing activities will only be done in areas cleared for this activity by Corps cultural resources staff and concurred in by the SHPO's. Therefore, bulldozing activities will not alter the cultural components of the NWSRS. (See "Cultural Resources" section).

6. **Fish and Wildlife.** This segment of the NWSRS was included in part to preserve wildlife habitat, including habitat for threatened and endangered species. The proposed work will benefit the least tern and piping plover, historical species seasonally found on Missouri River sandbar islands. Without the project, these areas would continue to vegetate (unless scoured during flood flows and/or heavy winter ice), making the islands unacceptable habitat for nesting and chick-rearing activities. Continued vegetation of the islands would also attract a more stable population of predators to the area, to the detriment of the terns and plovers.

ALTERNATIVES CONSIDERED

The various methods used within the different reaches are all alternative methods of habitat development. Habitat improvement of nesting areas for terns and plovers is still in experimental stages, and the "best" method or combination of methods is still not known and could differ along the different reaches of the Missouri River. Alternatives to the actions chosen for each reach are described below. For all reaches, the "no action" alternative could result in continued loss of nesting habitat due to vegetative encroachment and/or continued loss of eggs and nests due to flooding.

Alternatives to mechanical vegetative control:

1. Chemical clearing (with Rodeo herbicide)
2. Hand clearing
3. Burning
4. Flow manipulations

Chemical clearing is a preferred method of vegetative control, however, the chemical of choice (Rodeo herbicide) requires actively growing leafed-out plants for chemical translocation. Therefore, Rodeo cannot be used if we want to provide this nesting habitat prior to May 1994, as there is not sufficient time for leaf-out, then capping. We have no other chemical alternative that is environmentally suitable for river island use. Mechanical clearing will not kill the roots, so it is probable that chemical control may be necessary during the late summer if regrowth occurs.

Hand clearing is a viable method for clearing newly established vegetation in small areas, however it is labor-intensive and time consuming. Mechanical or chemical removal of dense vegetation over large areas is preferable to hand clearing, since it is faster and less labor-intensive.

Burning of live, dormant vegetation may have potential for use in some areas, however an intense, persistent flame is necessary. Much of the vegetation on the islands is stalky and difficult to burn. Burning does not kill the root system as chemical removal does, so re-growth is still a problem.

Flow manipulation has been suggested for scouring vegetation. The RCC has manipulated flows in the past when there were opportunities for flow fluctuations without hampering flood control and navigational responsibilities.

Alternatives to bulldozing to cap islands to higher elevations:

1. Dredge capping

Dredge capping islands is quite expensive due to the amount of acres involved, and the time frame limitations (most likely requiring several dredges). Although considered as an alternative, bulldozing seemed the more economical way to cap the islands.

Alternatives to dredging new islands in the upper end of Lewis and Clark Lake:

1. Floating islands
2. Bulldozing low-elevation islands

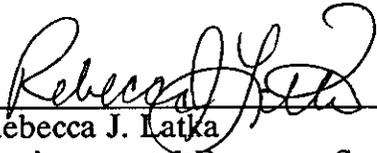
Floating islands were installed in two areas prior to the 1993 breeding season. The islands did not host nesting birds this year, so further expansion of this program at this time would be premature.

Bulldozing low elevation islands has been done before in this area to create higher nesting sites. However, the island sediments become less sandy and more silty as one moves downstream from the Niobrara River toward Lewis and Clark Lake. Downstream from RM 835 or so, the islands become too silty for reliable bulldozer work. We have had bulldozers get mired on islands in this area, and therefore we prefer to use a small dredge (presently being purchased) for this island building, as well as future small scale island replenishment activities.

COORDINATION WITH OTHER AGENCIES

A copy of the draft EA was sent to appropriate state and Federal agencies for review and to the Tern and Plover Management Team members, as well as to private individuals that have indicated interest in the Corps' habitat plans. A copy of the EA distribution list can be found in Appendix E. Written comments resulting from the draft EA are included in Appendix F.

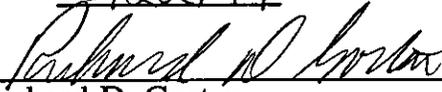
Prepared by:



Rebecca J. Latka
Environmental Resource Specialist

Date 3/22/94

Reviewed by:



Richard D. Gorton
Chief, Environmental Analysis Branch

Date 3/24/94

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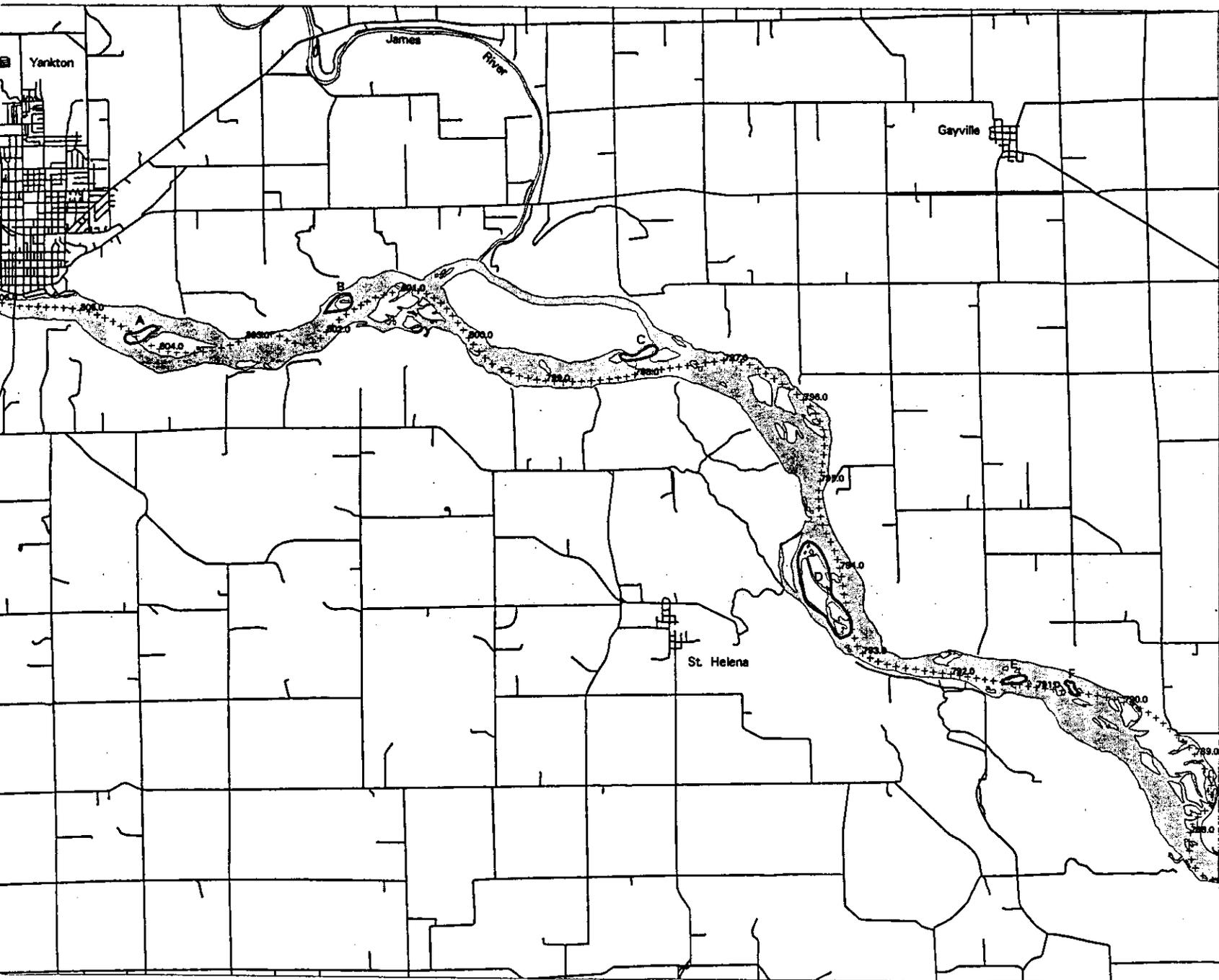
APPENDIX A
MAPS OF HABITAT AREAS

ISLAND ACREAGE
MISSOURI RIVER BELOW GAVINS POINT DAM

| <u>Island</u> | <u>Beginning acreage*</u> | <u>Anticipated final acreage**</u> |
|---------------|---------------------------|------------------------------------|
| A | 9.0 | 4.5 |
| B | 10.4 | 5.2 |
| C | 8.2 | 4.1 |
| D | 75.6 | 37.8 |
| E | 4.4 | 2.2 |
| F | 2.8 | 1.4 |
| G | 1.4 | 0.7 |
| H | 4.2 | 2.1 |
| I | 49.4 | 24.7 |
| J | 1.4 | 0.7 |
| K | 1.4 | 0.7 |
| L | 8.8 | 4.4 |
| M | 17.8 | 8.9 |
| N | 52.8 | 26.4 |
| O | 10.4 | 5.2 |
| P | 14.8 | 7.4 |
| Q | 7.4 | 3.7 |
| R | 8.6 | 4.3 |
| S | 23.0 | 11.5 |
| T | 6.4 | 3.2 |
| Total | 318.2 | 159.1 |

* from GIS database of islands, without watered and low areas, rounded to the nearest tenth of an acre

** assuming bulldozing 50% of existing sand to cap devegetated areas to appropriate elevations



1994 TERN & PLOVER HABITAT DEVELOPMENT

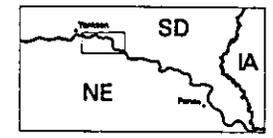
-  Proposed Habitat Development Site
-  Missouri River
-  Land
-  Transportation
-  Rivermiles (1/10)



SCALE 1:63360



Map Location



Source: Transportation - 1990 TIGER
Hydrology - 1982-83 National Wetlands Inventory



U.S. Army Corps of Engineers
Omaha District - Omaha, Nebraska
Operations/Regulatory GIS Unit

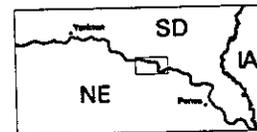
1994 TERN & PLOVER HABITAT DEVELOPMENT

-  Proposed Habitat Development Site
-  Missouri River
-  Land
-  Transportation
-  Rivermiles (1/10)



SCALE 1:63360

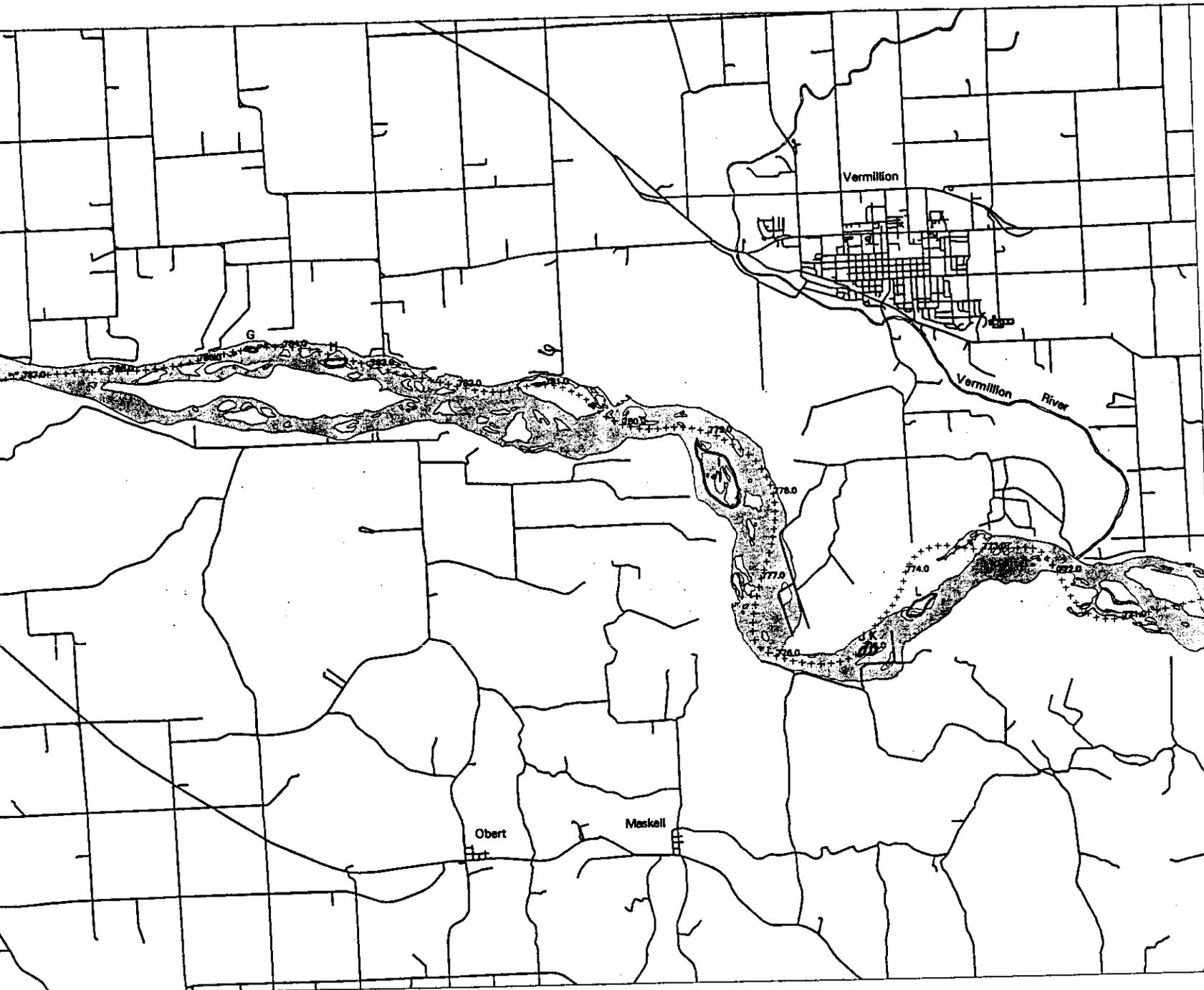
Map Location

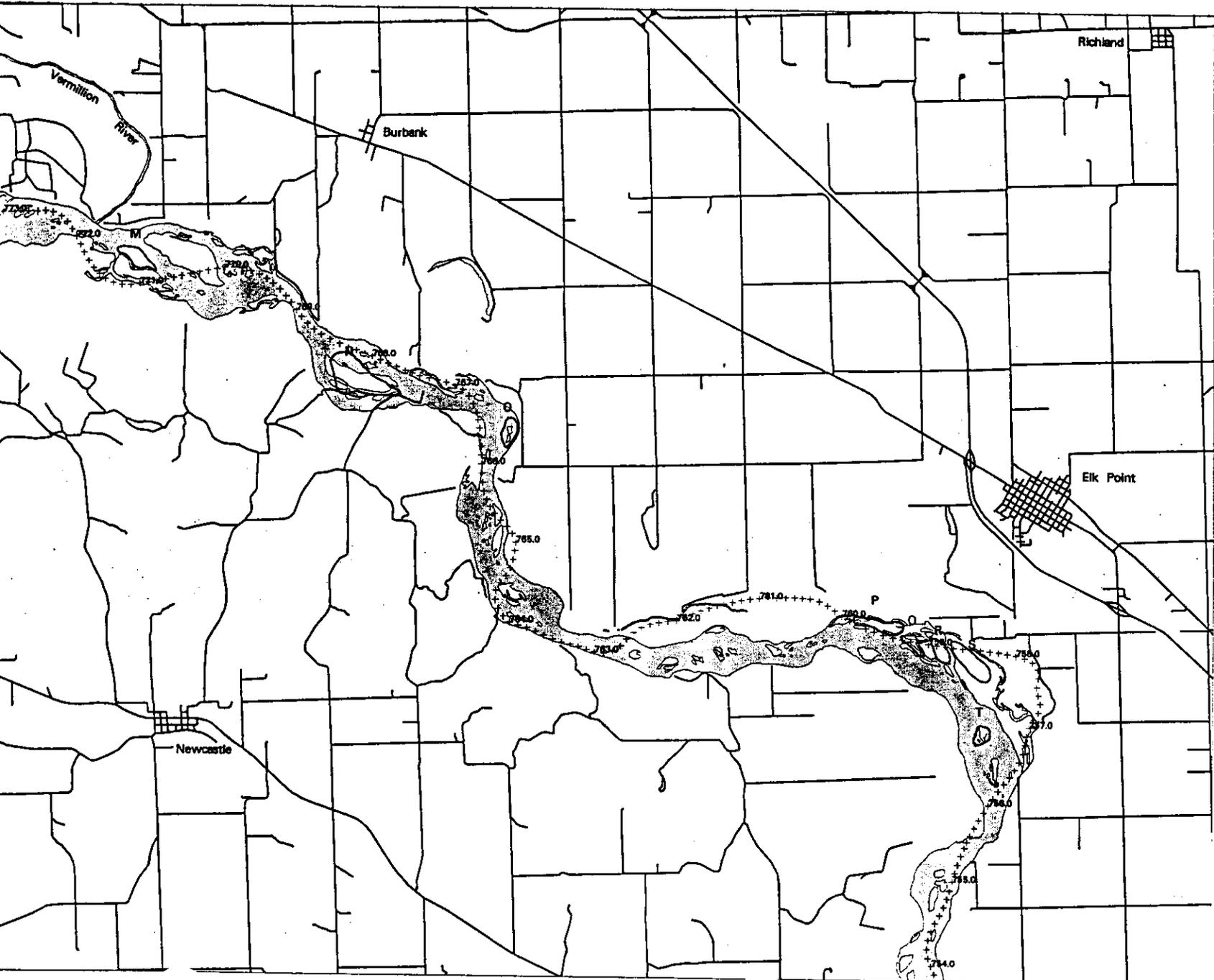


Source: Transportation - 1990 TIGER
Hydrology - 1982-83 National Wetlands Inventory



U.S. Army Corps of Engineers
Omaha District - Omaha, Nebraska
Operations/Regulatory GIS Unit



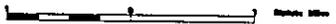


**1994 TERN & PLOVER
HABITAT DEVELOPMENT**

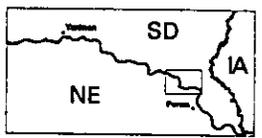
- Proposed Habitat Development Site
- ▨ Missouri River
- Land
- ∩ Transportation
- + Rivermiles (1/10)



SCALE 1:63360



Map Location



Source: Transportation - 1990 TIGER
Hydrology - 1982-83 National Wetlands Inventory



U.S. Army Corps of Engineers
Omaha District - Omaha, Nebraska
Operations/Regulatory GIS Unit

1994 TERN & PLOVER DREDGE SITES

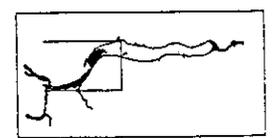
-  Proposed Dredge Island
-  Lewis & Clark Lake / Missouri River
-  Land
-  Transportation
-  Rivermiles (1/10)



SCALE 1:63360



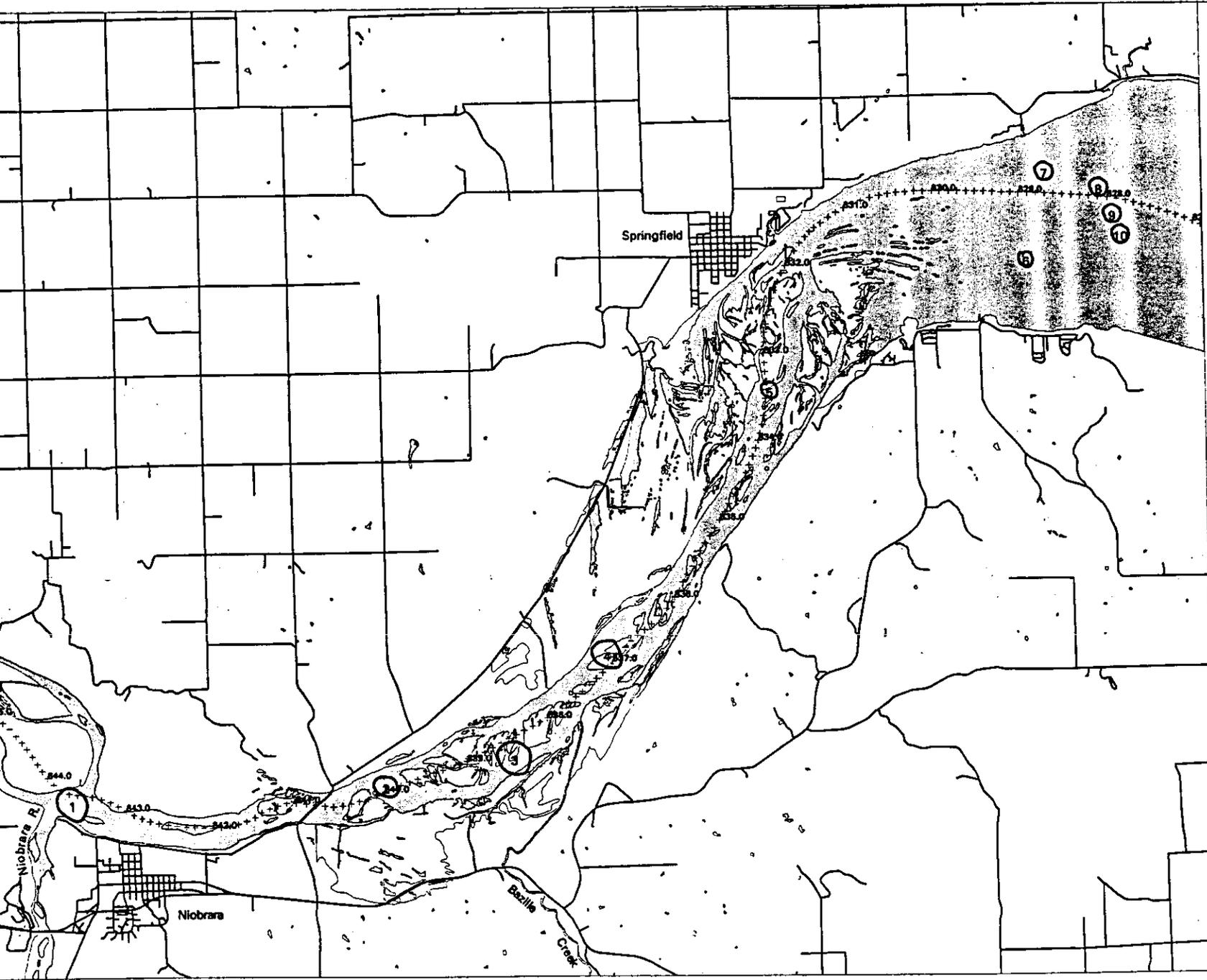
Map Location Within Lewis & Clark Lake



Source: Transportation - 1990 TIGER, Hydrology - USGS 7.5 Minute Quads (1959-79)

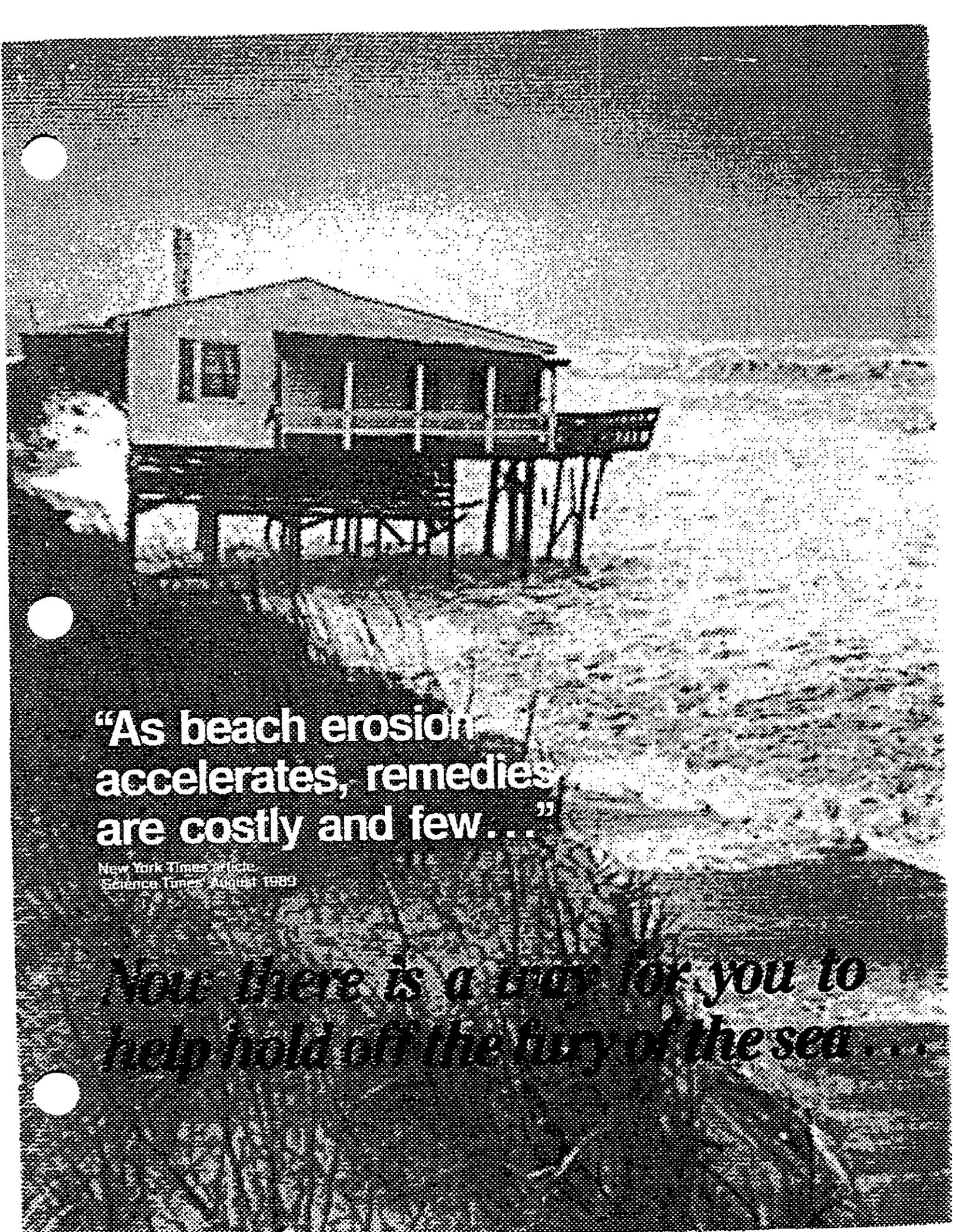


U.S. Army Corps of Engineers
Omaha District - Omaha, Nebraska
Operations/Regulatory GIS Unit



APPENDIX B

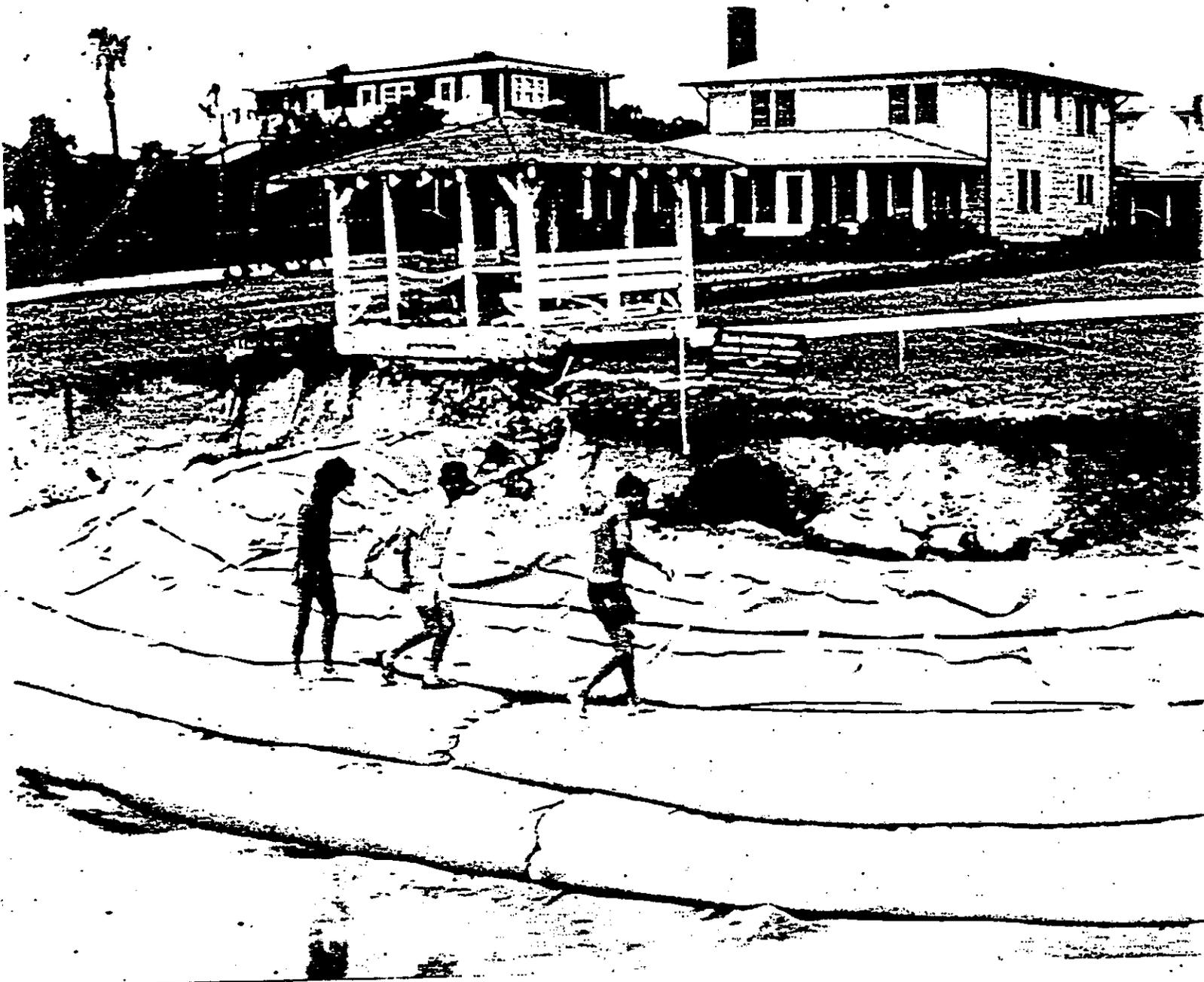
S.E.A. BAG INFORMATION



**"As beach erosion
accelerates, remedies
are costly and few..."**

New York Times article
Science Times August 1989

*Now there is a way for you to
help hold off the fury of the sea...*



"Stock" S.E.A. BAGs are 10' x 5', hold about 2.3 cubic yards and weigh approximately 3 tons when filled. Virtually any other size or shape S.E.A. BAG can be created on special order. Send sketch and description of your desired "special" to Bulk Lift for price quote and feasibility study.

Find out more!

Call Bulk Lift today at 708/428-6059 (Fax 708/428-7180) or one of our three plants listed below.

Bulk Lift International • 231 W. Main St. • Carpentersville, IL 60110

S.E.A. BAGTM by BULK LIFT

10173 Croydon Way
Sacramento, CA 95827
916/362-3300

231 W. Main Street, Suite 305
Carpentersville, IL 60110
708/428-6059

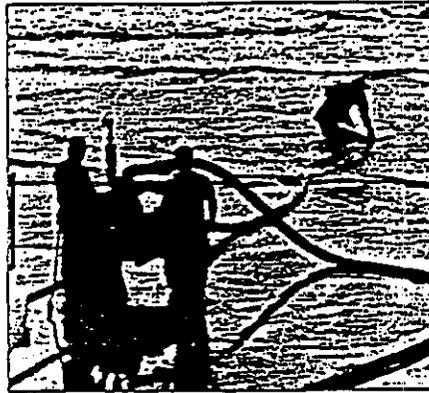
5228 Hwy. 421 N.
Wilmington, NC 28401
919/251-9316

To the best of our knowledge, the information provided by this brochure is reliable and accurate. Suggestions and recommendations for installation cannot be guaranteed, however, since the conditions under which S.E.A. bags are employed are beyond our control. No warranty is expressed or implied regarding the fitness for any purpose of the product or products herein described or the results obtained from their use. Nothing contained herein is to be construed as a recommendation or permission to infringe on any patent, patent application or trademark.

Installing S.E.A. BAGs is just this easy:



1 S.E.A. BAG (empty weight 26 lbs.) is easily put in place by one or two operators.



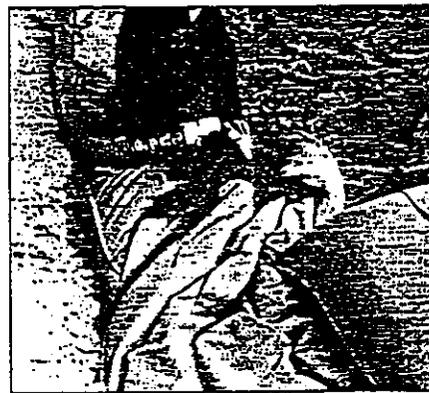
2 Pump and hoses are connected, suction hose taken into surf.



3 Sand/water slurry flows freely.



4 Filler hose inserted into one-way valve.



5 S.E.A. BAG fills with sand/water.



6 Water passes right through bag fabric, sand stays inside.

About S.E.A. BAGs:

S.E.A. BAGs are designed for sand filling, in place, by hydraulic pump.

They are ideally suited for use as:

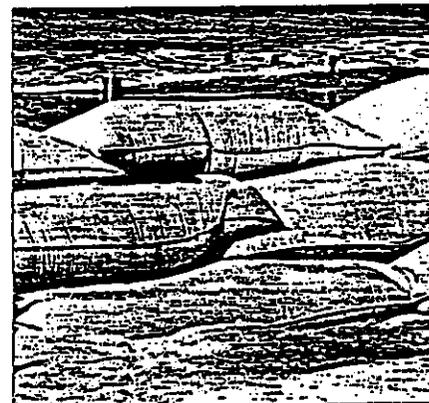
- Breakwaters
- Dikes
- Reefs
- Jetties
- Revetments
- Groins

and provide pipeline support and protection from bottom-scour.

They are large (10' x 5') stable containers, holding a volume of 2.2 cubic yards. S.E.A. BAGs will weigh in the vicinity of 3 tons when filled. They perform equally well on dry land, at the water line or completely under water.

S.E.A. BAGs are easily filled using available sand/water and a portable

hydraulic pump with hose pick-up and hose discharge. Filling is usually a two person operation with one operator suctioning sand/water and the other filling the bag through its self-sealing valve.



7 S.E.A. BAGs, filled in place . . . stay in place . . . can be covered with sand, tarp, etc.

S.E.A. BAGs are much more economical than rigid barriers such as stone, concrete, steel and timber of similar size and weight.

They are considered "semi-rigid structural units" and are durable enough to be able to qualify as "permanent." S.E.A. BAGs, however, can be removed much more easily than the rigid structures listed above.

S.E.A. BAGs can, of course, be filled off-site and transported in. As such they may be dry or hydraulically filled.

S.E.A. BAGs can also be filled with a variety of concrete mixtures.

Cape Hatteras Light Weathers Storm... Nearby Bridge Is Destroyed

A fierce ocean storm slammed a 200 foot long dredge into the only bridge to one of North Carolina's Outer Bank islands, destroying several hundred feet of elevated roadway and stranding 5000 people without power, telephones or access to the mainland.

Just 35 miles further down Hatteras Sound, on one of the most exposed points on the island, historic Cape Hatteras Light, the tallest brick lighthouse in the world, survived the storm.

The much-photographed 208 foot tall lighthouse was built in 1870, replacing an earlier structure on the same site. It is still the tallest lighthouse in the Continental United States.

When the original light was erected in 1802, to warn ships of the dangers of North

Carolina's Outer Banks' treacherous shoals...the dreaded "Graveyard of the Atlantic", the surf line was over 5000 feet away across low dunes and tidal flats. When the present structure, containing 1.25 million bricks, was completed the ocean was still 1500 feet away and the light appeared "safe"!

In the 120 years this historic tower has been in operation the relentless Atlantic has crept to within 400 feet of the distinctive Victorian-styled base, prompting much concern about the structure's safety, especially during fierce fall and winter storms such as this one, which occurred on October 26, 1990.

Contractors to the U.S. Department of the Interior chose to install 480 Shoreline Erosion Arrestor (S.E.A.) Bags™ manufac-

tured by Bulk Lift International, to build an on-shore wall, sort of an "artificial dune" to turn aside angry surf and prevent additional erosion.

Bulk Lift's Joseph Offenburger describes the process: "The empty, sand colored, polypropylene-covered porous fabric bags are hand carried to their ultimate location, a self-contained pump is rolled to the water's edge, hoses attached and each bag is filled with a sand/water slurry through its one-way valve. Water passes out through the permeable bag fabric; the sand stays inside permanently. When full, each 5'x10' bag holds 2.2 cubic yards and weighs in the vicinity of 3 tons. And the bags perform equally well on dry land, at the surf line or totally under water".

The revetments now protecting the Cape Hatteras Light are considered "semi-rigid structural units". The bags offer the additional benefits of being "wave force absorbent" (minimizing wave reflection), helping to relieve hydrostatic pressure (water absorbed passes through) and minimizing "toe-scour". They are extremely long lasting, virtually maintenance free and, when covered with a layer of beach sand, all but undetectable. Visitors will be able to walk on this 'new dune' without affecting the protection.

NEW "S.E.A.BAG"™ holds promise of beach erosion solution...

Scientists warn of global temperature increase and ever rising sea levels.

Whatever is going on, the weather has been wilder and more destructive than at any time in recent memory. In a large portion of the country this has manifested itself as smashing surf and rivers spilling out of their banks. Where is all the beach sand going?

There now appears to be a solution in the form of one of the older ideas, brought up-to-date with contemporary fabrics and modern materials handling. The sand bag... on a giant scale!

Meet S.E.A.Bag™ available NOW...

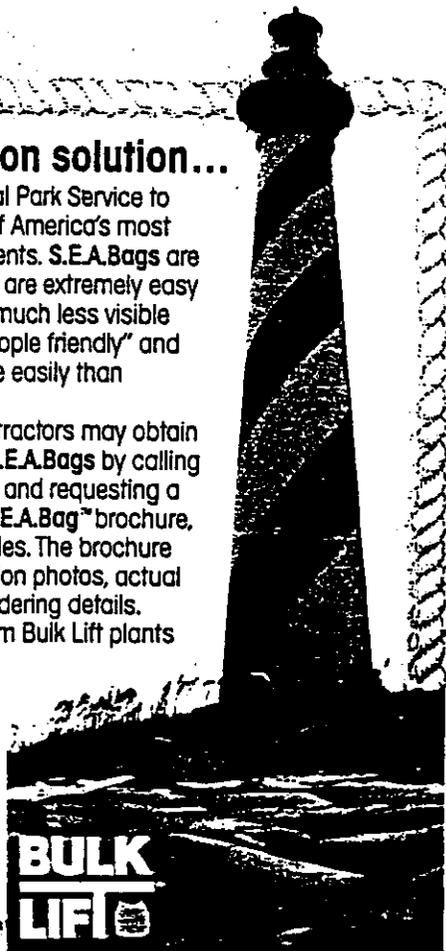
Shoreline Erosion Arrestor Bags (S.E.A.Bag™) from Bulk Lift International are in place protecting beach fronts in many parts of the U.S. They have

been chosen by the National Park Service to provide protection for one of America's most cherished National monuments. S.E.A.Bags are environmentally benign and are extremely easy to install. In place, they are much less visible than rigid solutions, are "people friendly" and can be removed much more easily than solid barriers.

Qualified installation contractors may obtain immediate information on S.E.A.Bags by calling 1-800-879-"BAGS" (2247) and requesting a copy of the new full-color S.E.A.Bag™ brochure, pricing and delivery schedules. The brochure contains sequence installation photos, actual in-place photos, size and ordering details. S.E.A.Bags are available from Bulk Lift plants coast to coast. Or write:

S.E.A.BAG

Bulk Lift International • 231 W. Main Street
Carpentersville, Illinois 60110 • 708/428-6059 FAX: 708/428-7180
S.E.A.Bag is the trade-mark of Bulk Lift International



**BULK
LIFT**

APPENDIX C
CULTURAL RESOURCES BRIEFING

ORIENTATION FOR CONTRACTORS ON NESTING HABITAT IMPROVEMENT ON
THE MISSOURI RIVER

It is possible that construction activities on these islands might uncover some important parts of our national past. This pamphlet tells you about some things to look for. IF YOU FIND SOMETHING THAT LOOKS IMPORTANT, REPORT IT TO CASEY KRUSE If you don't know if it is important, report it to Casey. Kruse will then report it to an archeologist in the Omaha District.

There are two sets of things that we want you to look for during your work, artifacts and features. Artifacts are manmade objects that are portable, features are not portable.

Not everything is equally important. One or two bricks are not important (they could be left over from a recent barbecue), but one piece of human bone is.

Artifacts

Bones. if you find any bones, you need to take a look at them. First of all, are they human? If they are human, stop work at this portion of the site RIGHT AWAY and report them to the Corps. Work on some other part of the island until we get this worked out. Do the bones looked like they have manmade marks, like grooves or holes in them? They might be bone tools.

Chipped Stone. Many tools used by the Indians were made from stone that they chipped into a sharp edge. Look for things like arrowheads or spear points, and also just small chips of stone.

Pottery. The white settlers and Indians both made pottery. Indian pottery is gray or brown in color and you might only see small pieces. The pottery made by the settlers looks like the plates and china we use today.

Glass. Glass that you might find will be flat window glass or curved glass used for bottles. Both come in many different colors, such as blue, red, purple or others.

Bricks, concrete and other building material. It is possible that some building material like this might be found. Look at the brick for impressed names or initials.

Metal. You might find iron or brass artifacts like old anchors or parts of steamship boilers.

Features

Boats. A number of steamboats that traveled along the Missouri River have been wrecked. Sometimes these wrecks were covered

over by silt and have been preserved. One of the most famous is the wreck of the "Bertrand", which was found about three miles from the Missouri River, in what is now Desoto Bend. They found the intact hull and most of the cargo. It is possible that you might find portions of a wreck buried in one of the islands. Look for any buried pieces of wood that are milled, that is planks or beams. It is possible that might find portions of the cargo, like bottles

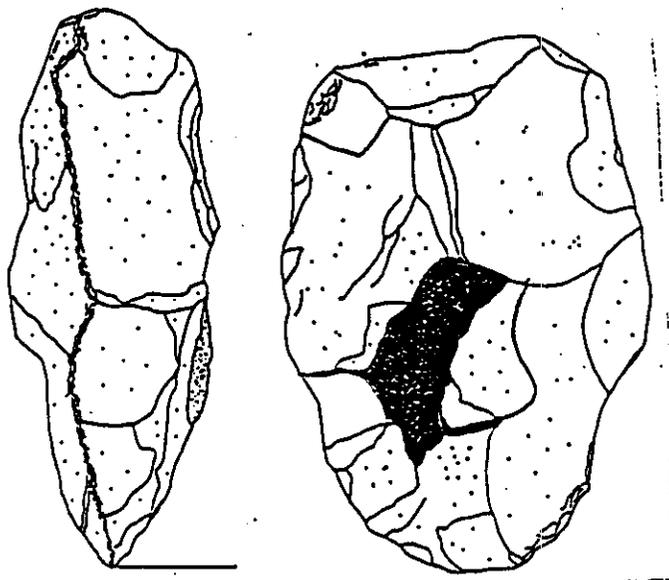
Buildings. It is possible that you might uncover building foundations during your work. These foundations might be made of wood, stone or concrete.

Firepits. It is possible that the remains of ancient or recent fire might remain. Look for any areas that appear darkened with charcoal or reddened.

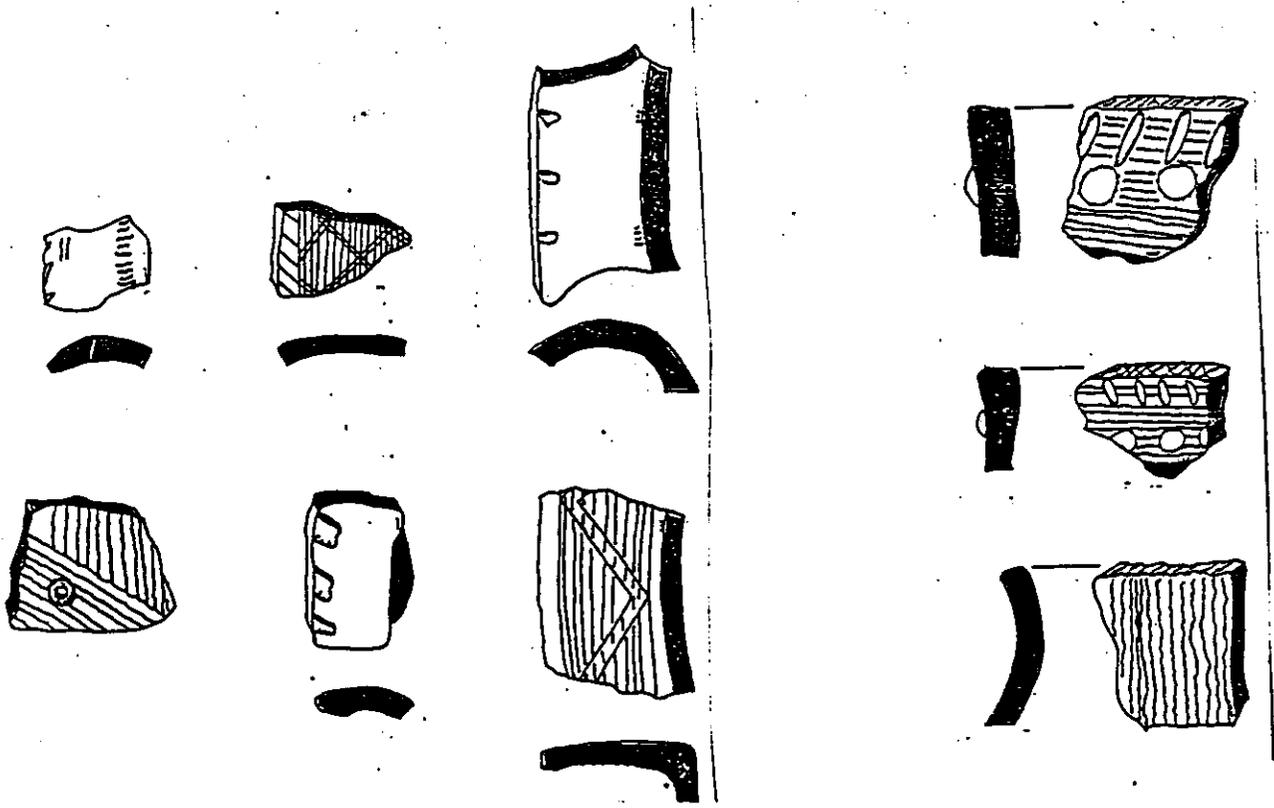
Things you need to report Any human bone should be reported right away, remember these are important discoveries. Any artifacts must be reported to Casey Kruse.

Things you don't need to report Any recent garbage, that dates to the last ten years, don't need to be reported. Any beer or pop cans, plastic food wrappers, paper cups are too recent for us to worry about. Older artifacts do need to be reported, but very recent one don't.

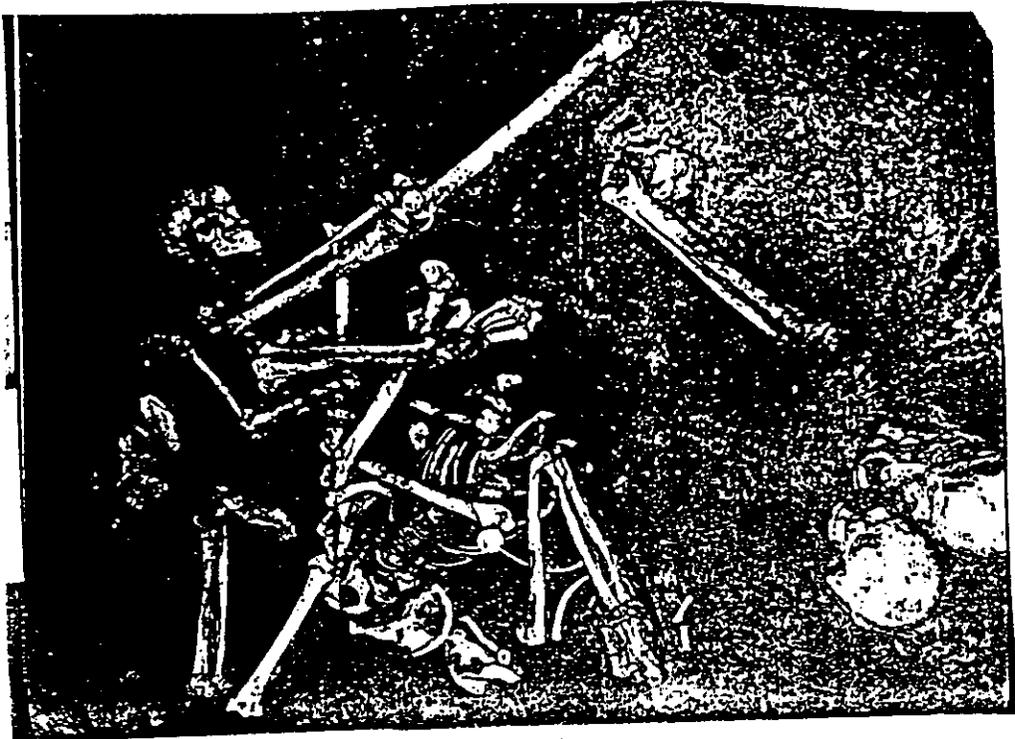
OMAHA DISTRICT ARCHEOLOGIST
ED BRODNICKI WORK (402)221-4888
HOME (402)554-1557



STONE TOOL



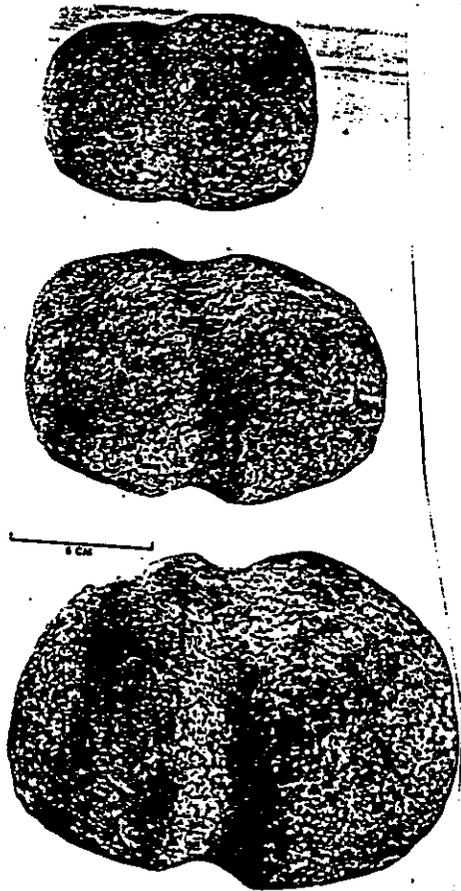
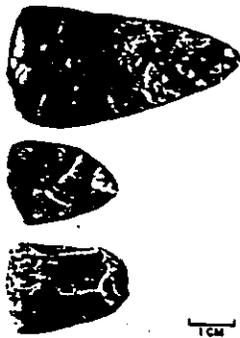
INDIAN POTTERY



BURIAL



FIGURE 4



STONE TOOLS

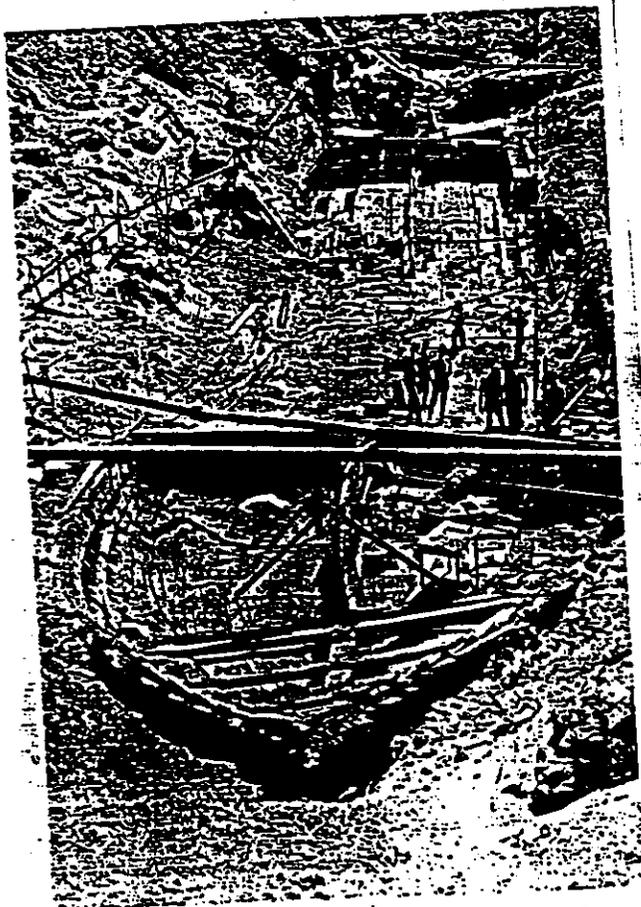


FIGURE 27 Foundation and pier of commanding officer's quarters at Fort Stevens.

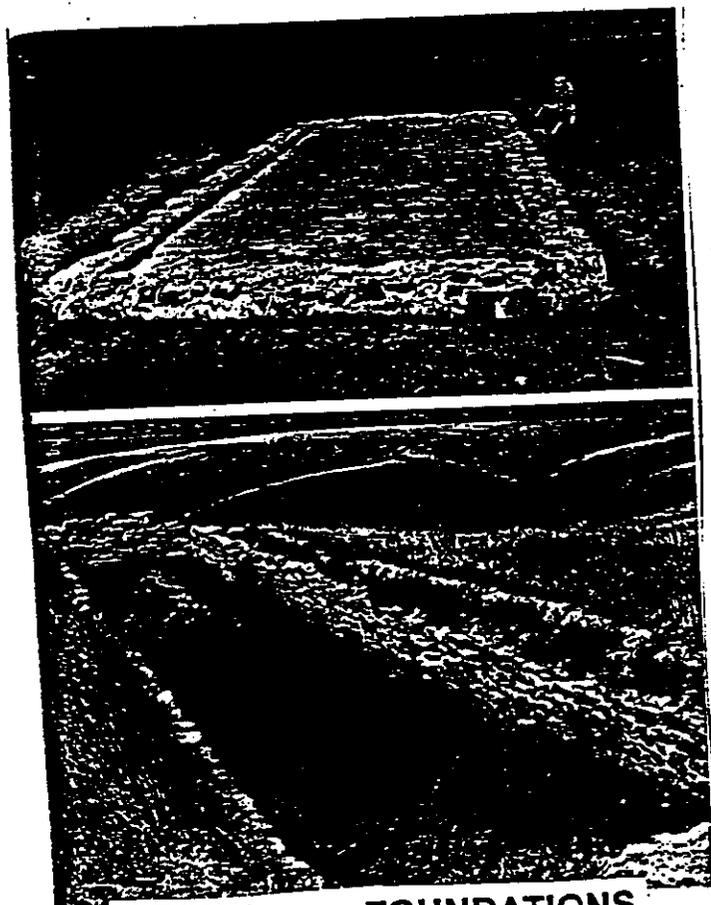


FIGURE 28 Brick base of observation platform at Fort Stevens.

WOODEN AND BRICK FOUNDATIONS



STEAMBOAT WRECK



STONE FOUNDATIONS

APPENDIX D
404 PERMIT APPLICATION
AND RELATED MATERIAL

ISLAND CONSTRUCTION BELOW GAVINS POINT DAM

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)

OMB APPROVAL NO. 0710-0003
Expires 30 September 1992

Public reporting burden for this collection of information is estimated to average 5 hours per response for the majority of cases, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Applications for larger or more complex projects, or those in ecologically sensitive areas, could take up to 500 hours. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service, Directorate for Information Operations and Projects, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Please DO NOT RETURN your completed form to either of these addresses. Completed application must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

The Department of the Army permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine, Protection, Research and Sanctuaries Act. These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. APPLICATION NUMBER (To be assigned by Corps)

3. NAME, ADDRESS, AND TITLE OF AUTHORIZED AGENT

N/A

Telephone no. during business hours

2. NAME AND ADDRESS OF APPLICANT

US Army Corps of Engineers
Omaha District, Planning Division
215 N. 17th St.
Omaha, NE 68102
Telephone no. during business hours

A/C () _____ (Residence)

A/C () _____ (Office)

Statement of Authorization: I hereby designate and authorize _____ to act in my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of the application.

A/C () _____ (Residence)
A/C () (402) 221-4598 _____ (Office)

SIGNATURE OF APPLICANT

DATE

Richard D. Porter

2/4/94

4. DETAILED DESCRIPTION OF PROPOSED ACTIVITY

4a. ACTIVITY

Proposed activity will remove early successional (<4" dbh) saplings, grasses, and shrubbery from 20 vegetated islands in the Missouri River below Gavins Point Dam. Vegetation removal will be done using mowers, chain saws, and brush hogs. Vegetative debris will then be "capped" with local bulldozed sediment (sand) to cover root stocks and to raise the elevation of the islands to a level above high summer discharges. Shoreline Erosion Arrestor (S.E.A.) bags may be used to reduce erosion on the upstream and channel sides of the finished islands.

4b. PURPOSE

The purpose of the operation is to provide additional unvegetated high-elevation nesting habitat for the least tern and the piping plover in compliance with the Endangered Species Act. The proposed time period for the bulldozing work is April 10 - 23, 1994. Vegetation removal will begin as soon as environmental compliance is completed and the ice is out of the river. Please provide 10-year maintenance clause for future work, consisting of vegetation control and sand replenishment and construction of new areas.

4c. CHARGE OF DREDGED OR FILL MATERIAL

Bulldozed sand will be piled above ordinary high water.

5. NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC., WHOSE PROPERTY ALSO ADJOINS THE WATERWAY

Numerous landowners; adjacent landowners are being notified by US Army Corps of Engineers Real Estate Division

6. WATERBODY AND LOCATION ON WATERBODY WHERE ACTIVITY EXISTS OR IS PROPOSED (see map)

Missouri River between Nebraska and South Dakota, below Gavins Point Dam, River Mile 804 - 758 (Targeted locations RMs 804.5, 802, 798.2, 794, 791.2, 790.5, 784.5, 783.2, 778.5, 775.2, 775, 774, 770.5, 768.8, 766, 760, 759.2, 759, 758.7, 758).

7. LOCATION ON LAND WHERE ACTIVITY EXISTS OR IS PROPOSED

ADDRESS:

N/A

STREET, ROAD, ROUTE OR OTHER DESCRIPTIVE LOCATION

COUNTY

STATE

ZIP CODE

LOCAL GOVERNING BODY WITH JURISDICTION OVERSITE:

8. Is any portion of the activity for which authorization is sought now complete? YES NO
 If answer is "yes" give reasons, month and year the activity was completed. Indicate the existing work on the drawings.

9. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharges or other activities described in this application.

| ISSUING AGENCY | TYPE APPROVAL | IDENTIFICATION NO. | DATE OF APPLICATION | DATE OF APPROVAL | DATE OF DENIAL |
|-----------------------------|---------------|--------------------|---------------------|------------------|----------------|
| NE Dept. of Env. Quality | NPDES | | 2/3/94 | | |
| SD Dept. Env. and Nat. Res. | NPDES | | 2/3/94 | | |

10. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

Richard D. Gorton, Chief, Environmental Analysis

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 3 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

PUBLIC NOTICE



U.S. Army Corps
of Engineers
Omaha District

Application No: 940110028
Applicant: Corps of Engineers
Waterway: Missouri River Mile 805 to 758
Yankton, Clay, & Union Counties,
South Dakota; Cedar & Dixon
Counties, Nebraska

Issue Date: February 28, 1994
Expiration Date: March 20, 1994

21 DAY NOTICE

Regulatory Branch P.O. Box 5 Omaha, Nebraska 68101-0005

**JOINT PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS
NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**

Under the provisions of Federal Regulation 40 C.F.R. Section 323.2(d)(1)(iii) regarding the incidental redeposit of excavated material in waters of the United States, notice is hereby issued to advise interested parties of the proposed activities to develop nesting habitat for the interior least tern and piping plover, endangered and threatened bird species, respectively, on Missouri River sandbar islands between Nebraska and South Dakota. The proposed activities include removal of existing early successional (<4" dbh) vegetation, and "capping" devegetated areas with approximately 2 feet of local bulldozed sand. Sand will be excavated from adjacent low sandbars and redeposited above normal high flows (38,500 cfs from Gavins Point Dam), but incidental redeposit of sand while approaching this elevation is possible. The primary goal of this project is to provide a minimum of 70 additional acres of nesting habitat for the terns and plovers prior to the beginning of the breeding season (mid-May). Vegetation removal is scheduled to begin in mid-March, once ice is out of the river and environmental compliance is achieved. Work will continue through the month of April, with devegetated islands being "capped" as other islands are being devegetated. Upstream and channel sides of the redeposited sand may be armored with Shoreline Erosion Arrestor (S.E.A.) bags, that are large (15 feet long), heavy duty hydraulically filled sand bags. This proposed development of sandbar nesting habitats is a portion of ongoing Endangered Species Act compliance activities as a result of Section 7 consultation on the Corps' operation of the Missouri River Main Stem System.

The proposed construction would take place on sandbar islands in the Missouri River, selected sites between river miles 805 to 758 (see map). This area is located within the Missouri National Recreational River. The work will be done by Corps' personnel from several Lake Offices. Oversight of habitat development will be provided by the Corps' Field Coordinator for Threatened and Endangered Species, as well as a maintenance foreman from the Lewis and Clark Lake Office. Upon completion of the development, the area will be managed and maintained by the Corps.

Historically, unvegetated sandbar islands formed naturally after spring flood flows. Sediment-laden waters would recede in the early summer months, leaving high elevation unvegetated islands for nesting terns and plovers. Early successional vegetation would be scoured off every few years by periodic ice and flooding. Presently, Missouri River flood flows are trapped in upstream reservoirs. Fewer new islands are being formed, and those that do form are at lower elevations (reflective of lower high water elevations). Vegetation on high elevation (older) islands is no longer scoured off, and these areas can no longer be used for nesting without vegetation management.

The Nebraska Department of Environmental Quality, 301 Centennial Mall South, PO Box 98922, Lincoln, Nebraska, 68509, and the South Dakota Department of Environment and Natural Resources, 523 E. Capitol, Pierre, South Dakota, 57501-3181 will review the proposed project for state certification in accordance with the provisions of Section 401 of the Clean Water Act. The certification, if issued, will not result in a violation of applicable water quality standards. The Nebraska Department of Environmental Quality and South Dakota Department of Environment and Natural Resources hereby incorporate this public notice as its own public notice and procedures by reference thereto.

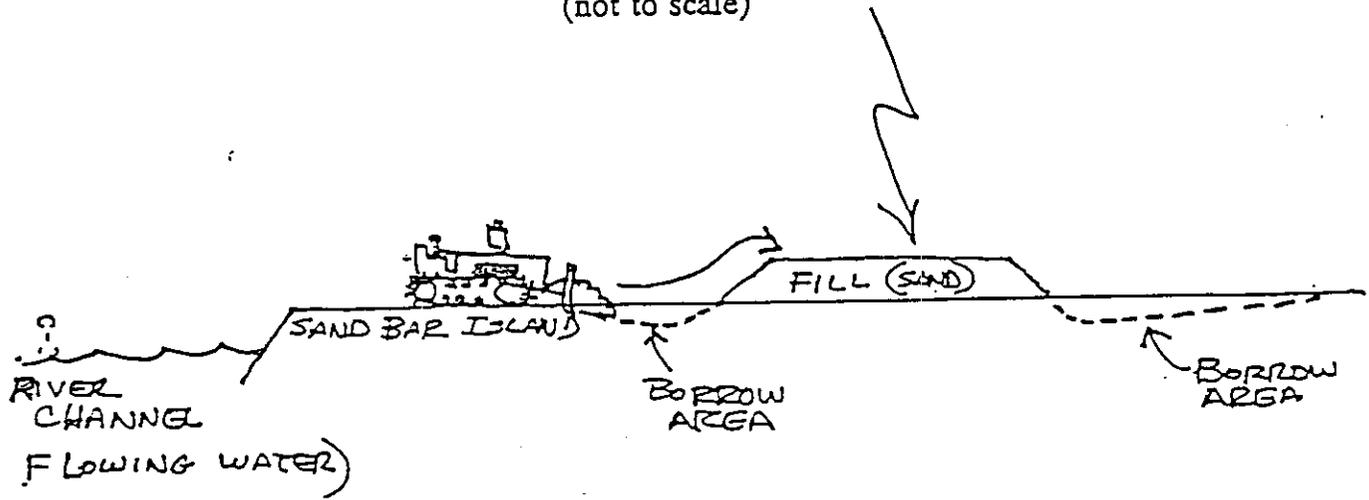
In compliance with the National Historic Preservation Act, letters describing the proposed activities have been mailed to the State Historic Preservation Officers in Nebraska and South Dakota. Bulldozer operators will be briefed orally and in writing by a Corps of Engineers Cultural Resources Specialist, describing potential cultural resources. If a potential resource is unearthed, bulldozing activities will cease until the area can be checked by an archeologist.

In compliance with the Endangered Species Act, our preliminary review indicates the proposed project will not negatively affect species or critical habitat of species designated as threatened or endangered. Endangered or threatened species listed in the project area include: Bald eagle, pallid sturgeon, interior least tern, and piping plover. It is the objective of the habitat development to positively affect nesting habitat for the least tern and piping plover.

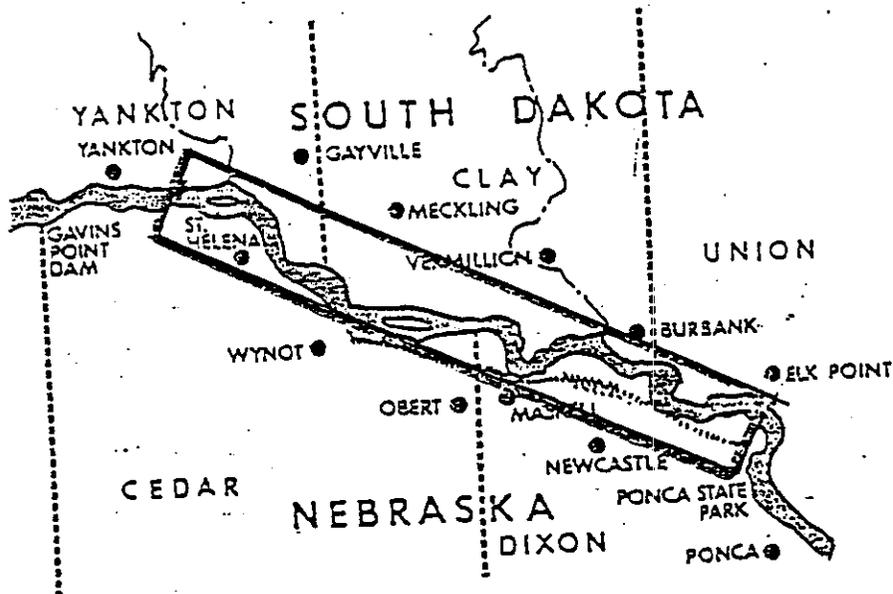
The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impact, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits reasonably expected to accrue from the proposed activity must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among these are conservation, wetlands, historic properties, fish and wildlife values, economics, aesthetics, general environmental concerns, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property owner, and, in general, the needs and welfare of the people. In addition, the evaluation of impact on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act.

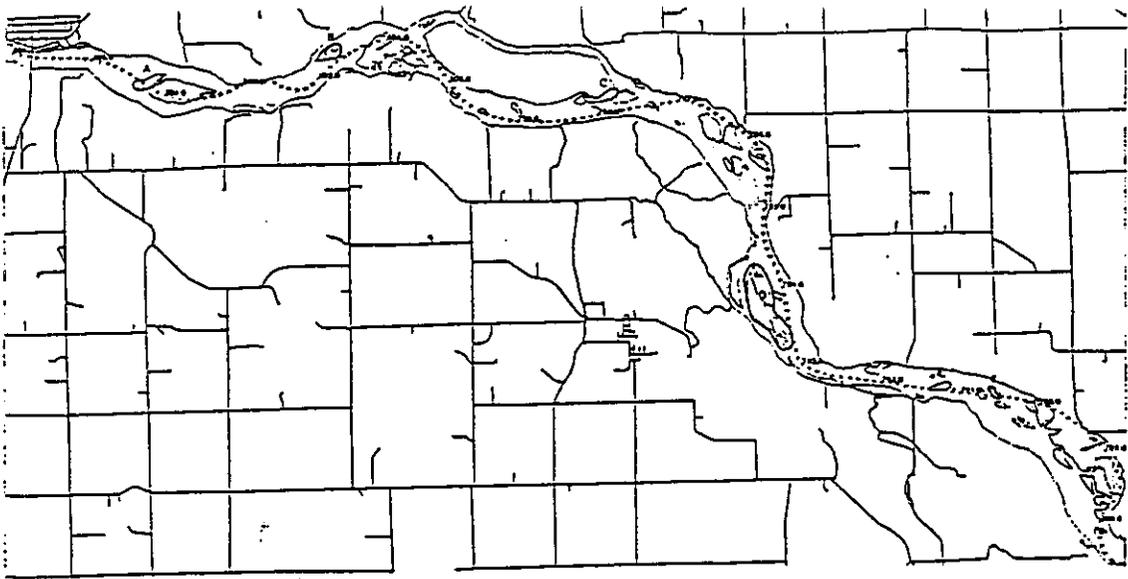
The Corps of Engineers is soliciting written comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. Comments will be used in the preparation of the final Environmental Assessment pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. Any agency or individual having an objection to the work should identify it as an objection with clear and specific reasons. All replies to the public notice should be sent to the U.S. Army Corps of Engineers, Regulatory Branch, P.O. Box 5, Omaha, Nebraska 68101-0005. For additional information, please contact Mr. Jerry Folkers at (402) 221-4173, or Ms. Becky Latka at (402) 221-4602. Comments received after the close of business on the expiration date of this public notice will not be considered.

"CAPPING" VEGETATIVE DEBRIS WITH BULLDOZED SAND
(not to scale)



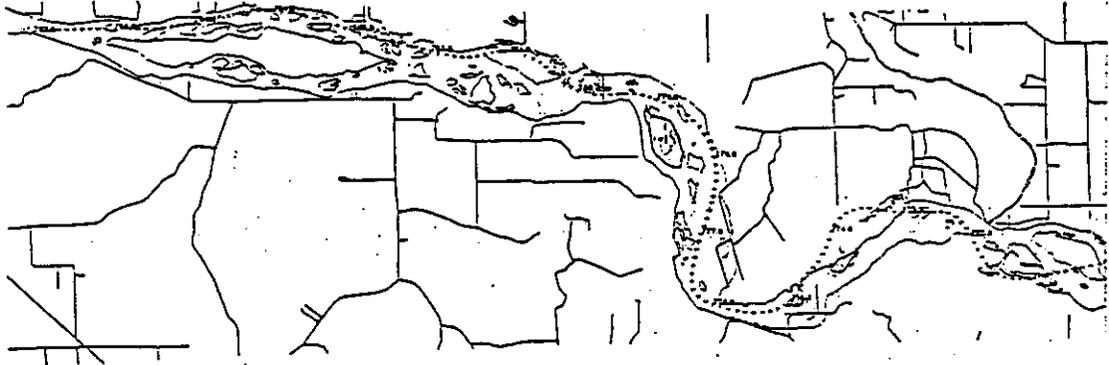
AREA MAP





1994 TERN & PLOVER
HABITAT DEVELOPMENT

- Proposed Habitat Development Site
- ▬ Missouri River
- ▬ Land
- Rivermiles (1/10)



Page 1 of 3



SCALE 1:63360



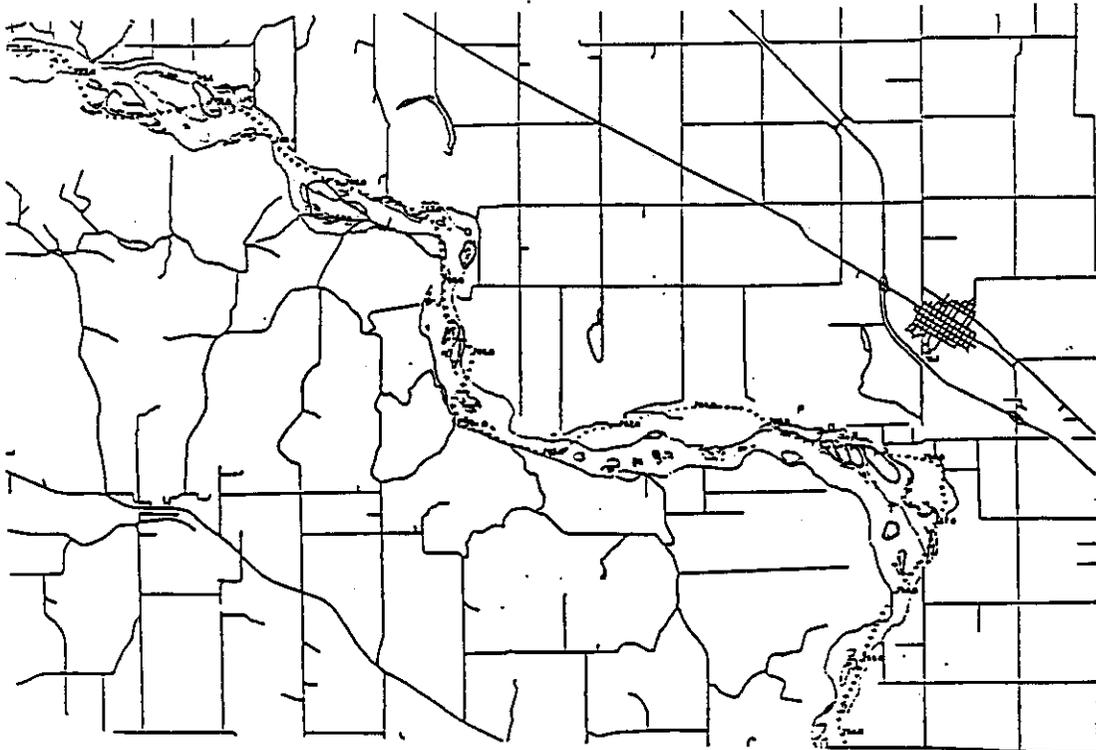
Map Location



Scale Conversion - 1994 FCR
Inventory - 1982-83 Revised Wetland Inventory



U.S. Army Corps of Engineers
Waterways Division
Vicksburg, Mississippi 39180



DEPARTMENT OF THE ARMY
STATEMENT OF FINDINGS

DA Permit No. NE-SD 940110028
Corps of Engineers
Nesting Islands
Missouri River

1. Project Authority and Description

Under the provision of 33 CFR Parts 335 thru 338, and instruction from the Office of the Chief of Engineers, the Corps of Engineers may authorize projects involving the discharge of additional dredging or fill material in waters of the United States. The proposed project involves the construction of 10 additional nesting islands on the Missouri River along Miles 828 to 843 in a segment of the river that is administered as a Recreation River. See attached public notice for locations of each site. The nesting islands will be constructed of sand/silt by a portable modular hydraulic dredge. The projects are located in Nebraska and South Dakota waters. The purpose of the project is to create up to 5 acres of additional nesting habitat for terns and plovers prior to the beginning of the breeding season. Upstream and channel sides of the dredged island may be armored with Shoreline Erosion Arrestor (S.E.A.) bags, that are large (15 feet long). All materials will be taken from the immediate area at the construction site.

2. Public Interest Review Comments

A public notice was issued on February 28, 1994. There was a 21 day comment period. A public notice was sent to interested public agencies and parties to request public interest review comments.

Federal Agencies

The U.S. Fish and Wildlife Service's stated in a letter dated February 11, 1994, that the Corps update page 4 of the Environmental Assessment to reflect that the Corps of Engineers is in formal consultation with the U.S. Fish and Wildlife Service on the Master Manual. However, the November 1990 biological opinion will remain in effect until a new opinion is issued.

The National Parks Service sent in a letter dated March 04, 1994 with recommendations for completion of the EA. No other Federal agency provided comments pursuant to Section 404 coordination.

State Agencies

The Nebraska State Historical Society stated in a letter dated February 22, 1994, that in the event a cultural resource is discovered a report of the evaluation by the Corps archaeologist be sent to their office.

The South Dakota State Historical Society reviewed the project and stated in a letter dated February 14, 1994 that the project will have no effect on historic resources.

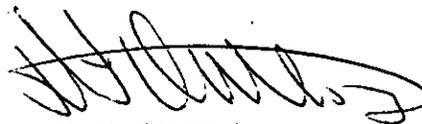
The Department of Environment and Natural Resources stated in a letter dated February 11, 1994 that a NPDES permit is not required. No other agencies had any comments pursuant to Section 404 coordination.

Water Quality Certifying Agencies

The Nebraska Department of Environmental Control provided water quality certification to this office by phone on March 21, 1994, with letter to follow, and South Dakota gave water quality certification for on March 22, 1994.

3. Other Considerations and Conclusion

The public interest review did not reveal any environmental impacts other than those discussed in the Environmental\Biological Assessment, 404(b)(1) evaluation and FONSI. Impacts on air quality, water quality, noise, socioeconomic factors and biologic factors were reviewed. The project complies with the guidelines. I have determined that this authorization is in the public interest. Therefore, the interest of the public would be served by authorization of the proposed work.



D. F. OWENS
Chief, Operations Division

SPECIAL CONDITIONS
CORPS OF ENGINEERS
940110028

- A. That all construction debris will be disposed of on land in such a manner that it cannot enter a waterway or wetland
- B. That equipment for handling and conveying materials during construction shall be operated to prevent dumping or spilling the materials into the waterway.
- C. That care will be taken to prevent any petroleum products, chemicals, or other deleterious materials from entering the water.
- D. That all work in the waterway is performed in such a manner so as to minimize increases in suspended solids and turbidity which may degrade water quality and damage aquatic life outside the immediate area of operation.
- E. That the clearing of vegetation will be limited to that which is absolutely necessary for construction of the project.
- F. That close coordination will be maintained by the Corps of Engineers with downstream water users, advising them of any water quality changes to be caused by the construction
- G. That all dredged or excavated materials, with the exception of that authorized herein, will be placed on an upland site above the ordinary high water line in a confined area, not classified as a wetland, to prevent the return of such materials to the waterway.
- H. That the disposal area, method of disposal, or method of dredging will not be changed without prior written approval of the District Engineer.
- I. That if terns and plover are present in the project area (earlier than 15 April) all work will be suspended until further evaluation can be made by a qualified biologist.
- J. If the project is not completed by May 1, a biologist will be provided at the site to look for any terns or plovers that may be present.
- K. This Authorization provides 10 years dredging (hydraulic or mechanical) maintenance for work, to enhance existing authorized islands.
- L. The Omaha District Regulatory Office is to be notified 30 days prior to each years start up date.

ISLAND CONSTRUCTION IN LEWIS AND CLARK LAKE (under existing 404)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
(33 CFR 328)

OMB APPROVAL NO. 0702-0036
Expires 30 June 1989

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine, Protection, Research and Sanctuaries Act. These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. APPLICATION NUMBER (To be assigned by Corps)

2. NAME AND ADDRESS OF APPLICANT

US Army Corps of Engineers
Lewis and Clark Lake Office
PO Box 710
Yankton, SD 57078

Telephone no. during business hours

A/C () NA (Residence)
A/C (02) 667-7873 (Office)

3. NAME, ADDRESS, AND TITLE OF AUTHORIZED AGENT

Telephone no. during business hours

A/C () _____ (Residence)
A/C () _____ (Office)

Statement of Authorization: I hereby designate and authorize _____ to act in my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of the application.

SIGNATURE OF APPLICANT

Raymond J. Bradley

DATE

27 FEB '92

DETAILED DESCRIPTION OF PROPOSED ACTIVITY

4a. ACTIVITY Construct small islands and enlarge existing islands to provide nesting habitat for piping plovers and least terns. Islands improvement will consist of enlarging 2 islands + 1 acre and 4 islands + 1/4 acre in size. Smaller islands will be constructed using dead trees/snags for upstream protection and placing sand/silt below them. Work will be performed in shall water areas, using a crane mounted on a barge. This method of construction will reduce turbidity and loss of water quality.

4b. PURPOSE

To provide new nesting habitat and expand area for existing nesting sites for endangered species. As islands become unusable for terns and plovers through process of vegetation, they will serve as habitat areas for other waterfowl species. The created islands that prove to be stable structures will be enlarged by additional dredging operations in future years. Please provide 10 year maintenance clause for future work, to enhance existing and allow construction of new areas.

4c. DISCHARGE OF DREDGED OR FILL MATERIAL

Approximately 10,000 cubic yards of sand/silt will be dredged from the river bed and placed in the shallow water areas for all islands. Approximately 5,000 c.y. of material will be placed below ordinary high water and the remainder will be above OHW. Islands formed will be ovoid and elongated in shape, parallel with the flow of the river to reduce hydraulic erosion from the current. The elevations of the islands will vary, pending location in the lake/river, but maintained at 1.5 to 2 feet above ordinary high water elevations based on projected flows.

(Proponent: DAEN-CWO-NI)

5. NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC., WHOSE PROPERTY ALSO ADJOINS THE WATERWAY

US Army Corps of Engineers

6. WATERBODY AND LOCATION ON WATERBODY WHERE ACTIVITY EXISTS OR IS PROPOSED

Lewis and Clark Lake, Missouri River mile 832 to 843
(Target locations are Miles 832.0, 832.8, 833.0, 833.1, 840.0 & 843.0)

7. LOCATION ON LAND WHERE ACTIVITY EXISTS OR IS PROPOSED

ADDRESS: Activity will be in the river, not on land. Adjacent land description is: S 25 & 35, T 93 N, R 60 W; S 2 & 20, T 92 N, R 60 W; S 23, T 92 N, R 61 W, Bon Homme County, So. Dak. and S 15, 22 & 27, T 33 N, R 5 W; S 9 & 12, T 32 N, R 6 W, Knox County, Nebraska

STREET, ROAD, ROUTE OR OTHER DESCRIPTIVE LOCATION

Locations are near Springfield and Running Water, SD & Santee and Niobrara, NE.

COUNTY STATE ZIP CODE

LOCAL GOVERNING BODY WITH JURISDICTION OVER SITE

8. Is any portion of the activity for which authorization is sought now complete? YES NO
If answer is "Yes" give reasons, month and year the activity was completed. Indicate the existing work on the drawings.

9. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharges or other activities described in this application.

| ISSUING AGENCY | TYPE APPROVAL | IDENTIFICATION NO. | DATE OF APPLICATION | DATE OF APPROVAL | DATE OF DENIAL |
|----------------|---------------|--------------------|---------------------|------------------|----------------|
| None | | | | | |

10. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

Michael P. Shea, Lake Manager

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.

PUBLIC NOTICE



U.S. Army Corps
of Engineers
Omaha District

Application No: 199270022
Applicant: Corps of Engineers
Waterway: Upper end of Lewis and Clark Lake,
South Dakota, near Springfield,
South Dakota

Issue Date: February 28, 1994
Expiration Date: March 20, 1994

21 DAY NOTICE

Replv to: Regulatory Branch P.O. Box 5 Omaha, Nebraska 68101-0005

JOINT PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS
NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Notice is hereby given that Section 404 Application No. 199270022, issued February 27, 1992, is being amended to include additional dredging activities needed to develop additional nesting habitat for the interior least tern and piping plover, endangered and threatened bird species, respectively, on Missouri River sandbar islands between Nebraska and South Dakota. The proposed activities include the construction of ten small islands out of dredged sediments deposited onto existing low elevation islands. Islands will be constructed using a portable modular hydraulic dredge. The dredge has an 8 inch intake hose and a 10 inch discharge hose, and has a capacity of 150 cubic yards of sand per hour. The purpose of the project is to create up to 5 acres of additional nesting habitat for the terns and plovers prior to the beginning of the breeding season (mid-May). Upstream and channel sides of the dredged islands may be armored with Shoreline Erosion Arrestor (S.E.A.) bags, that are large (15 feet long), heavy duty hydraulically filled sand bags. This proposed development of dredged nesting habitat is a portion of ongoing Endangered Species Act compliance activities as a result of Section 7 consultation on the Corps' operation of the Missouri River Main Stem System.

The proposed dredging will take place in the Missouri River, selected sites between river miles 843 to 828 (see map). Oversight of habitat development will be provided by the Corps' Field Coordinator for Threatened and Endangered Species, as well as a maintenance foreman from the Lewis and Clark Lake Office. Upon completion of the dredged islands, the area will be managed and maintained by the Corps.

Historically, unvegetated sandbar islands formed naturally after spring flood flows. Sediment-laden waters would recede in the early summer months, leaving high elevation unvegetated islands for nesting terns and plovers. Early successional vegetation would be scoured off every few years by periodic ice and flooding. Presently, Missouri River flood flows are trapped in upstream reservoirs. Fewer new islands are being formed, and those that do form are at lower elevations (reflective of lower high water elevations). Vegetation on high elevation (older) islands is no longer scoured off, and these areas can no longer be used for nesting without vegetation management.

The Nebraska Department of Environmental Quality, 301 Centennial Mall South, PO Box 98922, Lincoln, Nebraska, 68509, and the South Dakota Department of Environment and Natural Resources, 523 E. Capitol, Pierre, South Dakota, 57501-3181 will review the proposed project for state certification in accordance with the

provisions of Section 401 of the Clean Water Act. The certification, if issued, will not result in a violation of applicable water quality standards. The Nebraska Department of

Environmental Quality and South Dakota Department of Environment and Natural Resources hereby incorporates this public notice as its own public notice and procedures by reference thereto.

In compliance with the National Historic Preservation Act of 1966, as amended, the Corps of Engineers Cultural Resources Specialists have been consulted, and the proposed dredging activity would not pose a threat to potential shipwrecks in the area.

In compliance with the Endangered Species Act, our preliminary review indicates the proposed project will not negatively affect species or critical habitat of species designated as threatened or endangered. Endangered or threatened species listed in the project area include: Bald eagle, pallid sturgeon, interior least tern, and piping plover. It is the objective of the habitat development to positively affect nesting habitat for the least tern and piping plover.

The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impact, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits reasonably expected to accrue from the proposed activity must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among these are conservation, wetlands, historic properties, fish and wildlife values, economics, aesthetics, general environmental concerns, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. In addition, the evaluation of impact on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act.

The Corps of Engineers is soliciting written comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. Comments will be used in the preparation of the final Environmental Assessment pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. Any agency or individual having an objection to the work should identify it as an objection with clear and specific reasons. All replies to the public notice should be sent to the U.S. Army Corps of Engineers, Regulatory Branch, P.O. Box 5, Omaha, Nebraska 68101-0005. For additional information, please contact Mr. Jerry Folkers at (402) 221-4173, or Ms. Becky Latka at (402) 221-4602. Comments received after the close of business on the expiration date of this public notice will not be considered.

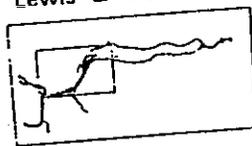
1994 TELESCOPE PLOVER DREDGE SITES

- Proposed Dredge Island
- ▭ Lewis & Clark Lake / Missouri River
- ▭ Land
- ~ Transportation
- Rivermiles (1/10)



SCALE 1:63360

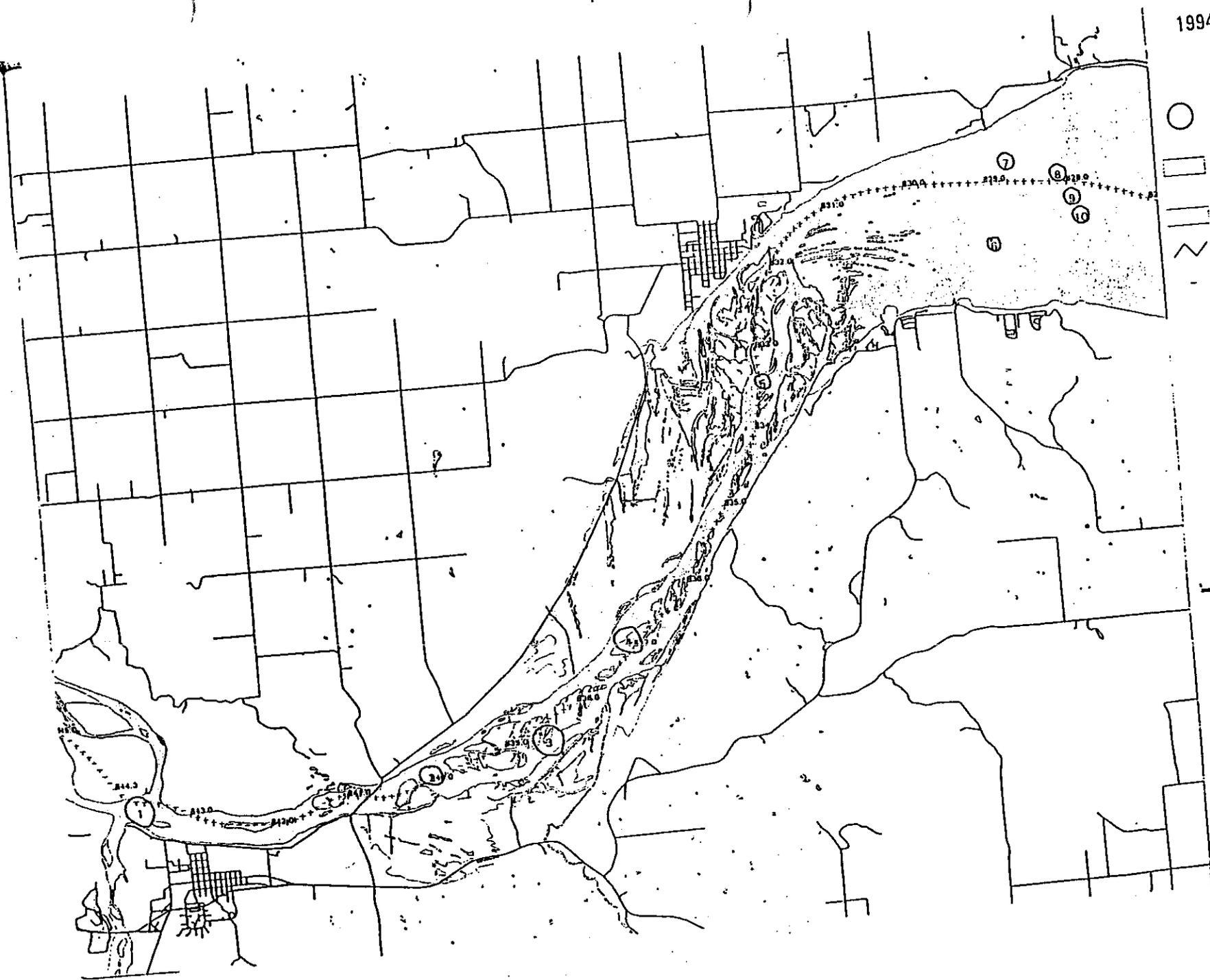
Map Location Within
Lewis & Clark Lake



Source: Transportation - 1990 TIGER, Hydrology -
USGS 7.5 Minute Quads (1959-79)



U.S. Army Corps of Engineers
Omaha District - Omaha, NE
Operations/Regulatory GIS



DEPARTMENT OF THE ARMY
STATEMENT OF FINDINGS
AMENDMENT # 2

DA Permit No. NE-SD 199270022

Corps of Engineers

Nesting Islands

Missouri River

1. Project Authority and Description

Under the provision of 33 CFR Parts 335 thru 338, and instruction from the Office of the Chief of Engineers, the Corps of Engineers may authorize projects involving the discharge of additional dredging or fill material in waters of the United States. The proposed project involves the construction of 10 additional nesting islands on the Missouri River along Miles 828 to 843 in a segment of the river that is administered as a Recreation River. See attached public notice for locations of each site. The nesting islands will be constructed of sand/silt by a portable modular hydraulic dredge. The projects are located in Nebraska and South Dakota waters. The purpose of the project is to create up to 5 acres of additional nesting habitat for terns and plovers prior to the beginning of the breeding season. Upstream and channel sides of the dredged island may be armored with Shoreline Erosion Arrestor (S.E.A.) bags, that are large (15 feet long). All materials will be taken from the immediate area at the construction site.

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A public notice was issued on February 28, 1994. There was a 21 day comment period. A public notice was sent to interested public agencies and parties to request public interest review comments.

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The U.S. Fish and Wildlife Service stated in a letter dated February 11, 1994, that the Corps update page 4 of the Environmental Assessment to reflect that the Corps of Engineers is in formal consultation with the U.S. Fish and Wildlife Service on the Master Manual. However, the November 1990 biological opinion will remain in effect until a new opinion is issued.

The National Parks Service sent in a letter dated March 04, 1994 with recommendations for completion of the EA. No other Federal agency provided comments pursuant to Section 404 coordination.

State Agencies

The Nebraska State Historical Society stated in a letter dated February 22, 1994, that in the event a cultural resource is discovered a report of the evaluation by the Corps archaeologist be sent to their office.

The South Dakota State Historical Society reviewed the project and stated in a letter dated February 14, 1994 that the project will have no effect on historic resources.

The Department of Environment and Natural Resources stated in a letter dated February 11, 1994 that a NPDES permit is not required.

The Nebraska Game and Parks Commission stated in a letter dated March 14, 1994, that they were reiterating a NGPC recommendation from their letter dated April 17, 1992 that commented on a Draft Environmental Assessment for dredging in occurrence of mussel populations and potential impacts to any such populations.

Water Quality Certifying Agencies

The Nebraska Department of Environmental Control provided water quality certification to this office by phone on March 21, 1994, with letter to follow, and South Dakota gave water quality certification on March 22, 1994.

3. Other Considerations and Conclusion

The public interest review did not reveal any environmental impacts other than those discussed in the Environmental\Biological Assessment, 404(b)(1) evaluation and FONSI. Impacts on air quality, water quality, noise, socioeconomic factors and biologic factors were reviewed. The project complies with the guidelines. I have determined that this authorization is in the public interest. Therefore, the interest of the public would be served by authorization of the proposed work.



D. F. OWENS
Chief, Operations Division

SPECIAL CONDITIONS
CORPS OF ENGINEERS
199270022

A. That all construction debris will be disposed of on land in such a manner that it cannot enter a waterway or wetland

B. That equipment for handling and conveying materials during construction shall be operated to prevent dumping or spilling the materials into the waterway.

C. That care will be taken to prevent any petroleum products, chemicals, or other deleterious materials from entering the water.

D. That all work in the waterway is performed in such a manner so as to minimize increases in suspended solids and turbidity which may degrade water quality and damage aquatic life outside the immediate area of operation.

E. That the clearing of vegetation will be limited to that which is absolutely necessary for construction of the project.

F. That close coordination will be maintained by the Corps of Engineers with downstream water users, advising them of any water quality changes to be caused by the construction

G. That all dredged or excavated materials, with the exception of that authorized herein, will be placed on an upland site above the ordinary high water line in a confined area, not classified as a wetland, to prevent the return of such materials to the waterway.

H. That the disposal area, method of disposal, or method of dredging will not be changed without prior written approval of the District Engineer.

I. That if terns and plover are present in the project area (earlier than 15 April) all work will be suspended until further evaluation can be made by a qualified biologist.

J. If the project is not completed by May 1, a biologist will be provided at the site to look for any terns or plovers that may be present.

K. This Authorization provides 10 years dredging (hydraulic or mechanical) maintenance for work, to enhance existing authorized islands.

L. The Omaha District Regulatory Office is to be notified 30 days prior to each years start up date.

SECTION 404(b)(1) EVALUATION

APPLICANT: Corps of Engineers

APPLICATION NUMBER: 940110028

PROJECT: LEAST TERN AND PIPING PLOVER NESTING ISLAND DEVELOPMENT

Preliminary Final

1. Review of Compliance (Sec. 230.10(a)-(d))

a. Does the discharge represent the least environmentally damaging practicable alternative? YES ___ NO ___ YES X NO ___

b. If in a special aquatic site, must the activity associated with the discharge have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose? (If no, see section 2 and information gathered for EA alternative.) YES ___ NO ___ YES X NO ___

c. Does the activity appear to:

(1) violate applicable state water quality or effluent standards prohibited under Section 307 of the Clean Water Act. YES ___ NO ___ YES ___ NO X ___

(2) jeopardize the existence of Federally listed endangered or threatened species or their habitats? YES ___ NO ___ YES ___ NO X ___

(3) violate requirements of any Federally designated marine sanctuary? (If no, see section 2b and check responses from resource and water quality certifying agencies.) YES ___ NO ___ YES ___ NO X ___

d. Will the activity cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, esthetic, and economic values? (If no, see section 2). YES ___ NO ___ YES ___ NO X ___

e. Will appropriate and practicable steps be taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem? (If no, see section 5). YES ___ NO ___ YES X NO ___

| <u>N/A</u> | <u>Signi- ficant</u> | <u>Not Signi- ficant</u> |
|------------|--------------------------|----------------------------------|
|------------|--------------------------|----------------------------------|

2. Technical Evaluation Factors (Subparts C-F)

a. Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C).

| | | | |
|---|----------|-----|----------|
| (1) Substrate impacts. | --- | --- | <u>X</u> |
| (2) Suspended particulates/turbidity impacts. | --- | --- | <u>X</u> |
| (3) Water column impacts. | --- | --- | <u>X</u> |
| (4) Alteration of current patterns and water circulation. | --- | --- | <u>X</u> |
| (5) Alteration of normal water fluctuations/hydro-period. | <u>X</u> | --- | --- |
| (6) Alteration of salinity gradients. | <u>X</u> | --- | --- |

b. Biological Characteristics of the Aquatic Ecosystem (Subpart D).

| | | | |
|---|-----|-----|----------|
| (1) Effect on threatened/endangered species and their habitat. | --- | --- | <u>X</u> |
| (2) Effect on the aquatic food web. | --- | --- | <u>X</u> |
| (3) Effect on other wildlife (mammals, birds, reptiles and amphibians). | --- | --- | <u>X</u> |

c. Special Aquatic Sites (Subpart E).

| | | | |
|--------------------------------|----------|-----|----------|
| (1) Sanctuaries and refuges. | <u>X</u> | --- | --- |
| (2) Wetlands. | --- | --- | <u>X</u> |
| (3) Mud flats. | <u>X</u> | --- | --- |
| (4) Vegetated shallows. | <u>X</u> | --- | --- |
| (5) Coral reefs. | <u>X</u> | --- | --- |
| (6) Riffle and pool complexes. | <u>X</u> | --- | --- |

d. Human Use Characteristics (Subpart F).

| | | | |
|---|----------|-----|----------|
| (1) Effects on municipal and private water supplies. | <u>X</u> | --- | --- |
| (2) Recreational and commercial fisheries impacts. | --- | --- | <u>X</u> |
| (3) Effects on water-related recreation. | --- | --- | <u>X</u> |
| (4) Esthetic impacts. | --- | --- | <u>X</u> |
| (5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves. | --- | --- | <u>X</u> |

REMARKS: Where a check is placed under the significant category, preparer add explanation below.

3 Evaluation of Dredged or Fill Material (Subpart G).

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. (Check only those appropriate).

- (1) Physical characteristics. YES NO
- (2) Hydrography in relation to known or anticipated sources of contamination. YES NO
- (3) Results from previous testing of the material or similar material in the vicinity of the project. YES NO
- (4) Known, significant, sources of persistent pesticides from land runoff or percolation. YES NO
- (5) Spill records for petroleum products or designated (Section 311 of Clean Water Act) hazardous substances. YES NO
- (6) Other public records of significant introduction of contaminants from industries, municipalities or other sources. YES NO
- (7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities. YES NO
- (8) Other sources (specify). YES NO

b. An evaluation of the appropriate information in 3a indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants, or that levels of contaminants are substantively similar at extraction and disposal sites and not likely to contaminate. The material meets the testing exclusion criteria. YES NO

4. Disposal Sites Delineation (Section 230.11(f)).

a. The following factors as appropriate have been considered in evaluating the disposal site.

- (1) Depth of water at disposal site. N/A YES NO
- (2) Current velocity, direction, and variability at disposal site. N/A YES NO
- (3) Degree of turbulence. N/A YES NO
- (4) Water column stratification. N/A YES NO
- (5) Discharge vessel speed and direction. N/A YES NO
- (6) Rate of discharge. N/A YES NO
- (7) Dredged material characteristics (constituents, amount, and type of material, settling velocities). N/A YES NO
- (8) Number of discharges per unit of time. N/A YES NO

(9) Other factors affecting rates and patterns of mixing (specify).

N/A YES NO

The bulldozed sand will be piled on top of devegetated areas at elevations above those corresponding with 38,500 cfs discharge out of Gavins Point Dam.

List appropriate references: N/A

b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable.

YES NO

5. Actions to Minimize Adverse Effects (Subpart H). All appropriate and practicable steps have been taken, through application of recommendation of Section 230.70-230.77 to ensure minimal adverse effects of the proposed discharge. List actions taken.

YES NO

See Environmental Assessment

6. Factual Determination (Section 230.11). Does a review of appropriate information as identified in items 2-5 above indicate that there is minimal potential for short- or long-term environmental effects of the proposed discharge as related to:

- | | | |
|---|---|-----------------------------|
| a. Physical substrate at the disposal site. | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| b. Water circulation, fluctuation and salinity. | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| c. Suspended particulates/turbidity. | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| d. Contaminant availability. | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| e. Aquatic ecosystem structure and function. | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| f. Disposal site. | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| g. Cumulative impacts on the aquatic ecosystem. | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| h. Secondary impacts on the aquatic ecosystem. | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |

Evaluation Responsibility.

a. Prepared by: Rebecca J. Latka
Rebecca J. Latka
Environmental Resource
Specialist

Date: 3/20/94

b. Reviewed by: Richard D. Gorton
Richard D. Gorton
Chief, Environmental Analysis Branch

Date: 3/21/94

c. Approved by: Rosemary C. Hargrave
John Morton
Chief, Regulatory Branch

Date:

Findings.

a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines. YES X NO

b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following exceptions: YES NO

c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):

- (1) There is a less damaging alternative.
- (2) The proposed discharge will result in significant degradation of the aquatic ecosystem.
- (3) The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem.

D.F. Owens

Date:

D.F. OWENS
Chief, Operations Division

APPENDIX E
EA MAILING LIST

LIST OF AGENCIES SOLICITED FOR COMMENT

U.S. Fish and Wildlife Service, Nebraska

U.S. Fish and Wildlife Service, South Dakota

U.S. Fish and Wildlife Service, North Dakota

U.S. Fish and Wildlife Service, Montana

National Park Service, O'Neill, NE

National Park Service, Omaha, NE

Montana Department of Fish, Wildlife, and Parks

Missouri Department of Conservation

Nebraska Game and Parks Commission

North Dakota Department of Game and Fish

South Dakota Department of Game, Fish, and Parks

U.S. Environmental Protection Agency, Region 7, Kansas
City

U.S. Environmental Protection Agency, Region 8, Denver

Mr. Warren Hill
National Park Service
Niobrara/Missouri National Scenic Riverways
P.O. Box 591
O'Niell, NE 68763

Mr. Don Castleberry, Regional Director
National Park Service
Midwest Region
1709 Jackson
Omaha, NE 68102-2571

U.S. Environmental Protection Agency
Region 7
721 Minnesota Ave.
Kansas City, KS 66101

Mr. Jim Scherer, Regional Administrator
U.S. Environmental Protection Agency
Region 8
Denver, CO 80202-2405

Mr. Tom Jacobs
2420 Chicago
Sioux City, IA 51106

Mr. Berdell Kinsley
Box 427
Springfield, SD 57062

Mr. Henry Vornbrock
4508 Wellington Ave.
Sioux City, IA 51106

Mr. Greg Wees
Norfolk Daily News
Box 977
Norfolk, NE 68701

Mr. R.J. Foley
P.O. Box 7
Tyndall, SD 57078

Mr. Don Foley
P.O. box 863
Yankton, SD 57078

Mr. John Sidle
U.S. Fish and Wildlife Service
203 W. Second St., Federal Bldg.
Grand Island, NE 68801

Ms. Nell McPhillips
U.S. Fish and Wildlife Service
420 S. Garfield Ave., Suite 400
Pierre, SD 57501

Mr. Mark Dryer
U.S. Fish and Wildlife Service
1500 Capitol Ave.
Bismarck, ND 58501

Mr. Greg Wingfield
Nebraska Game and Parks
P.O. Box 30370
Lincoln, NE 68503

Ms. Eileen Dowd Stukel
South Dakota Game, Fish and Parks
523 E. Capitol
Pierre, SD 57501

Mr. Randy Kreil
North Dakota Game and Fish
100 N. Bismarck Expressway
Bismarck, ND 58501

Dr. Rochelle Renken
Missouri Department of Conservation
P.O. Box 180
Jefferson City, MO 65102

Mr. Dennis Christopherson
U.S. Fish and Wildlife Service
1501 14th St., Suite 230
Billings, MT 59812

Mr. Arnold Dood
Montana Department of Fish, Wildlife, and Parks
1400 S. 19th St.
Bozeman, MT 59715

Mr. Richard Wearn
808 Vassar
Vermillion, SD 57069

Mr. Mark Czaplewski
Nebraska Public Power District
P.O. Box 499
Columbus, NE 68602

Mr. W.L. Zemanek
Rt. 1, Box 41
Westfield, IA 51062

APPENDIX F

COMMENT LETTERS AND CORPS' RESPONSES



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3101



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3101

October 5, 1993

Colonel John Morton
US Army, Corps of Engineers
Regulatory Branch
P O Box 5
Omaha SD 68101-0005

RE: 940110028
Corps of Engineers/Nesting Islands
Missouri River/Mile 805 to 758

Dear Colonel Morton:

The Department of Environment and Natural Resources has reviewed the request for water quality certification under Section 401 of the Clean Water Act pertaining to the placement of fill materials in the Missouri River between miles 805 and 758, Yanikton, Clay and Union Counties, SD. The stated purpose of the project is to provide additional nesting habitat for the interior least tern and piping plover.

It is determined that the activity proposed for this section of the Missouri River should not result in violation of applicable surface water quality standards for the State of South Dakota. Water quality certification is granted based on the information submitted in the application.

If you have questions pertaining to this determination, please contact me at the number listed below.

Sincerely,

Joan M. Bornem
Joan M. Bornem

Natural Resources Senior Scientist
Point Source Control Program
Phone: (605) 773-3351

cc: Steve Naylor, US COE, Pierre
Bob Mairley, US EPA, Denver

February 11, 1994

Mr. Richard D. Gorton
Chief, Environmental Analysis Branch
Planning Division
Corps of Engineers, Omaha District
215 North 17th Street
Omaha, NE 68102-4978

Dear Mr. Gorton:

Thank you for your letter dated February 2, 1994, requesting confirmation that your project does not need a National Pollutant Discharge Elimination System (NPDES) permit. As I explained to Ms. Latka, the Administrative Rules of South Dakota, Section 74:03:17:03.01, exclude discharges of dredged or fill materials into waters of the United States which are regulated under § 404 of the Clean Water Act from our NPDES requirements. If all the discharges from your project meet this criteria, a NPDES permit is not required. Also, for your information, this Program granted § 401 water quality certification for your project on October 5, 1993.

Thank you for your interest in protecting the natural resources of South Dakota. If you have any questions regarding the contents of this letter, please feel free to contact me.

Sincerely,

Kent R. Woodmansey

Kent R. Woodmansey
Natural Resources Engineer
Point Source Control Program
(605) 773-3351

F A X T R A N S M I T T A L M E M O
TO: Jerry Folker
DEPT: _____ FAX #: _____
FROM: _____ PHONE: _____
CO: _____ FAX #: _____
Post-it brand fax transmittal memo 7071

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| NO. OF PAGES |
| 8 |



Nebraska Game and Parks Commission

2200 N. 33rd St. / P.O. Box 30370 / Lincoln, NE 68503-0370 / (402) 471-0641

CORPS' RESPONSES

March 14, 1994

Mr. Jerry Folkers, Project Manager
U.S. Army Corps of Engineers
Regulatory Branch
PO Box 5
Omaha NE 68101-0005

RE: Permit Application 199270022 (habitat improvement, upper end of Lewis and Clark Lake) and Permit application 940110028 (habitat improvement, Missouri River R.M. 805 to 758)

Dear Mr. Folkers:

Nebraska Game and Parks Commission staff members have reviewed the location maps and descriptions of the proposed actions for the applications identified above. We concur with the assessment that interior least terns and piping plovers will derive significant benefits from the work being planned.

We wish to reiterate a NGPC recommendation contained in a letter dated April 17, 1992 commenting on a Draft Environmental Assessment for dredging (Greg Wingfield, NGPC to Becky Latka, Corps of Engineers):

"The Corps should evaluate the occurrence of mussel populations and potential impacts to any such populations. While the endangered Higgins' eye pearly mussel (Lampsilis higginsii) has not been documented along the Missouri River in Nebraska, there have been few, if any, comprehensive surveys to determine its presence or absence. The Higgins' eye is considered a "big river" species. Additionally, a specimen of the scale shell mussel (Leptodea leptodon) was collected below Gavins Point Dam in 1982. This species is a C2 candidate species for listing. The Corps should incorporate mussel surveys when planning future activities that physically alter aquatic habitats."

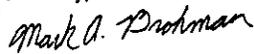
1.

1. We have requested additional information on the mussels and their habitat, and photos or sketches of the mussels, if available. This material will be added to the Corps' "Guidelines" handbooks that the field personnel have for reference while monitoring and surveying terns and plovers during the summer. If mussel beds or mussel shells are found, this information will be documented and passed onto Mary Clausen.

Mr. Jerry Folkers
March 14, 1994
Page 2

The areas being considered for dredging may not provide suitable habitat for mussels due to shallow water and highly unstable substrate. Even so, we recommend the Corps do a "no-frills" study to determine if mussels are in the project area. Depending on water depth, this could simply consist of a wade-through of the area and feeling by hand/foot for the presence of mussels. For additional information on appropriate techniques please contact Mary Clausen of our Natural Heritage Program at (402) 471-5421.

Sincerely,



Mark A. Brohman
Environmental Analyst Supervisor

CMT/MAB/dj

pc: Greg Wingfield
Gene Zuerlein



SOUTH DAKOTA STATE HISTORICAL SOCIETY
State Historical Preservation Center



CORPS' RESPONSES

February 18, 1994

Mr. Richard D. Gorton
Chief, Environmental Analysis Branch
Corps of Engineers, Omaha District
215 North 17th Street
Omaha, NE 68102-4978

SECTION 106 DETERMINATION OF EFFECT
Project: 940218054F - Least Terns, Piping Plovers, 94(Corps)
Location: Clay and Yankton County

Dear Mr. Gorton:

In reviewing the above referenced undertaking under Section 106 of the Historic Preservation Act of 1966 (as amended), the Historical Preservation Center has made the following determinations concerning the effect of your proposed action on historic and archeological resources.

Based on the information supplied to this office in your letter of February 14, 1994, and additional information available to this office it is the determination of the State Historic Preservation Officer that the project will have a NO EFFECT on historic resources if the following conditions are met.

1. Contact is made with Mr. Bob Winter of Yankton to discuss the location and history of riverboats on the Missouri. He is a noted local amateur historian with first hand knowledge of the location of riverboat remains. His address is 111 Pike, Riverside Acres, Yankton, SD 57078. 605/665-5607
2. That work done at Site A be monitored by an archeologist as this location is quite close to the known remains of a riverboat.

If you have questions or comments please contact Jim Wilson at the Historic Preservation Center.

Sincerely,

J. R. Fishburne
State Historic Preservation Officer

1.

2.

1. Concur.
2. An archaeologist will be on-site during excavation of Site A.

P.O. Box 417
Phone (605) 677-3314

3 East Main Street

Vermillion, SD 57069
FAX: (605) 677-3364



NEBRASKA STATE HISTORICAL SOCIETY
1500 R STREET, P.O. BOX 82554, LINCOLN, NE 68501-2554
(402) 471-3270 Fax (402) 471-3100 Museum Fax (402) 471-3314

CORPS' RESPONSES

22 February 1994

Richard D. Gorton
Planning Division
Corps of Engineers
215 North 17th Street
Omaha, NE 68102-4978

Re: Nesting Habitat
Missouri River
Cedar and Dixon Cos., NE
H.P. #9402-038-01

Dear Mr. Gorton:

Thank you for the information on the proposed improvements to nesting habitat areas on sandbars in the Missouri River. Our records also indicate the possible presence of an early frontier settlement (site 25DX22) named North Bend. The only location information available is the vicinity of Sections 16, 17, 20, and 21, T32N, R4E.

We concur with the proposed actions to protect steamboat wrecks and other historic resources outlined in your 14 February 1994 letter. We request that in the event a cultural resource is discovered a report of the evaluation by the Corps archaeologist be sent to our office.

1.

1. Concur.

Sincerely,

Terry L. Steinacher
H.P. Archaeologist

Concurrence:

L. Robert Puschendorf
Deputy NeSHPO



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Fish and Wildlife Enhancement
480 S. Casfield Avenue, Suite 400
Pierre, South Dakota 57501-3408

CORPS' RESPONSES

February 22, 1994

Mr. Richard D. Gorton
Chief, Environmental Analysis Branch
Corps of Engineers, Omaha District
Planning Division
215 North 17th Street
Omaha, Nebraska 68102-4978

Re: Draft Environmental Assessment for
Least Tern and Piping Plover
Habitat Development

Dear Dick:

This is in response to your February 11, 1994, letter and enclosed draft Environmental Assessment of the effects of spring 1994 new habitat development activities on the Missouri River for the interior least tern and the piping plover.

We have reviewed the Environmental Assessment and only recommend that you update page 4 to reflect that the Corps of Engineers is in formal consultation with the U.S. Fish and Wildlife Service on the Mester Manual. However, the November 1990 biological opinion will remain in effect until a new opinion is issued.

If you have any questions concerning these comments, please call Neil McPhillips of this office at (605) 224-8693.

Sincerely,

PCING

M.S. Zschomler
Field Supervisor
South Dakota Field Office

1.

1. Changes have been made.



United States Department of the Interior

NATIONAL PARK SERVICE
Midwest Region
1709 Jackson Street
Omaha, Nebraska 68102-2571



CORPS' RESPONSES

IN REPLY REFER TO:
L7619 (MWR-PQ)

MAR 04 1994

Mr. Richard D. Gorton
Chief, Environmental Analysis Branch
Planning Division
U.S. Army Corps of Engineers, Omaha District
215 North 17th Street
Omaha, Nebraska 68102-4978

Dear Mr. Gorton:

This is to provide early coordination review of the environmental assessment (EA) for spring activities to improve nesting habitat conditions for the interior least tern and the piping plover on the Missouri River from the Niobrara River to Ponca, Nebraska.

We have the following recommendations for completion of the EA:

1. We understand that mechanical island clearing is necessary in lieu of the spring ice scours and high spring flows that would clear islands under natural flow conditions. We also understand that the U.S. Army Corps of Engineers (Corps) is required by the biological opinion on operation of the Missouri River main stem system, issued by the U.S. Fish and Wildlife Service in 1990, to mitigate the adverse effects of the current operation of the system on the endangered least tern and the threatened piping plover by providing suitable nesting habitat for the species. The Missouri River between Gavins Point Dam and Ponca, supports the largest concentration of least terns and piping plovers known to exist on the Great Plains. Maintenance of nesting habitat there is crucial to the protection of both species. One of the reasons this segment was added to the National Wild and Scenic Rivers System (NWSRS) was for the habitat it provides for threatened and endangered species.

This segment was also added to the NWSRS because of its scenic value. High bank wooded islands contribute to that value. The National Park Service (NPS) wants to insure that the proposed island clearing does not adversely affect islands that might have become wooded under natural flow conditions. New wooded islands may be needed to replace wooded islands that are eroding away. We would like to see the ratio of wooded to sand bar islands on this segment of the Missouri River mimic pre-dam conditions to the greatest extent possible. In view of this concern, we request that

1.

1. An explanation of the island selection process is included in the final EA.

CORPS' RESPONSES

the EA be revised to explain how islands were selected for vegetative clearing and whether any of them would have had the potential to develop into wooded islands under natural flow conditions, given their elevation and other appropriate factors. We recommend that only islands that would have been scoured under pre-dam conditions be selected for vegetative clearing, and islands that would have developed into wooded islands under pre-dam conditions be allowed to do so to the extent possible.

2. We recommend that the "National Wild and Scenic Rivers System" portion of the E/ be expanded to include a section on how the proposed action would impact the fish and wildlife values for which this segment was included in the NWSRS. This section should indicate that this segment was designated to preserve wildlife habitat, including habitat for threatened and endangered species. An analysis of the impacts of the proposed action and the no action alternative on fish and wildlife should be included in this section.

In addition, we have the following specific comments on the proposed project:

1. We recommend that trees and other woody species removed from the islands be chipped and returned to the river to provide nutrients.
2. To protect the scenic value of the river, avoid the use of sea bags if at all possible. If they must be used, they should be buried with sand to the greatest extent possible.
3. The large helicopters proposed for use will result in adverse noise impacts in the project area. Impacts to recreationists should be mitigated by advising the public of the activities or avoiding commonly used areas, if possible. Please coordinate any restrictions of recreational use (area closures etc.) with the NPS. Care should also be taken to avoid impacts from helicopter downdraft.
4. If possible, please coordinate landowner contacts with the NPS. Any interest on the part of landowners in easements or fee title acquisition could be a very positive step towards preservation of the river corridor.
5. The briefing paper on cultural resources included in the EA is well done. For further protection of cultural resources, all operators should familiarize themselves with this paper and be briefed by an archeologist before starting work. Where there is a high likelihood of cultural remains, an archeologist should be onsite during construction.

1.

1. Answered on previous page.

2.

2. A section on the fish and wildlife values of the National Wild and Scenic Rivers System has been added.

3.

3. Due to the time constraints associated with this project, it was felt that the 402 permit necessary for chipping wood into the river would not be completed prior to vegetation removal.

4.

4. Concur.

5.

5. The helicopters have been dropped from this spring's plans, but may be utilized at a later date.

6.

6. A copy of our landowner list will be made available to the NPS. The Corps is also investigating the purchase or leasing of tern and plover nesting islands.

7.

7. Concur.

6. The confluence of the Niobrara River with the Missouri River is a rather heavily used area. Have the potential impacts of attracting the birds to a heavily used area been considered? 8.
7. Measures should be taken to protect the staging area from damage caused by heavy equipment. 9.
8. The NPS would prefer that vegetative clearing be achieved by changing the Missouri River mainstem flow regime to more closely approximate natural flows. We commend the effort displayed by the Corps in the review and update of the Missouri River Master Water Control Manual and look forward to continued coordination in that process. 10.

These comments are provided as informal technical assistance and are not intended to reflect our probable response to the final document prepared in this matter to comply with the National Environmental Policy Act or any other applicable environmental protection mandate. If you have any questions on our comments please contact Mr. Terry Cederstrom or Ms. Jill Medland of my staff, at 402-221-3481. To coordinate project activities with the NPS, please contact Superintendent Warren Hill, Niobrara/Missouri National Scenic Riverways, at 402-336-3970.

Sincerely,



F.A. Calabrese
Acting Regional Director

cc:
Superintendent, Niobrara/Missouri National
Scenic Riverways
P.O. Box 591
O'Neill, Nebraska 68763

Gary Sullivan, Midwest Regional Office
Resources Management Specialist
Resources Management Branch
1709 Jackson Street
Omaha, Nebraska 68102

CORPS' RESPONSES

8. The birds are attracted there even without our habitat work due to the amount of open sand deposited in the Missouri River just downstream from the mouth of the Niobrara River. Our habitat work should make those areas higher and safer from tributary flooding events, thereby enhancing the productivity of the terns and plovers. Colony sites will be posted and roped as needed to protect the nests and chicks.
9. Concur.
10. Adjustments to the Missouri River flow regime are not made at the District level, and are beyond the scope of this EA.