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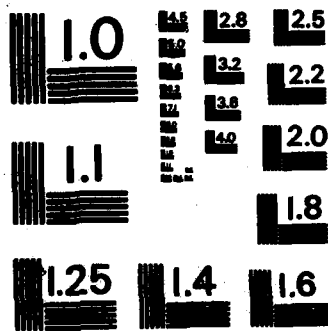
FINAL ENVIRONMENTAL IMPACT STATEMENT MINNESOTA RIVER  
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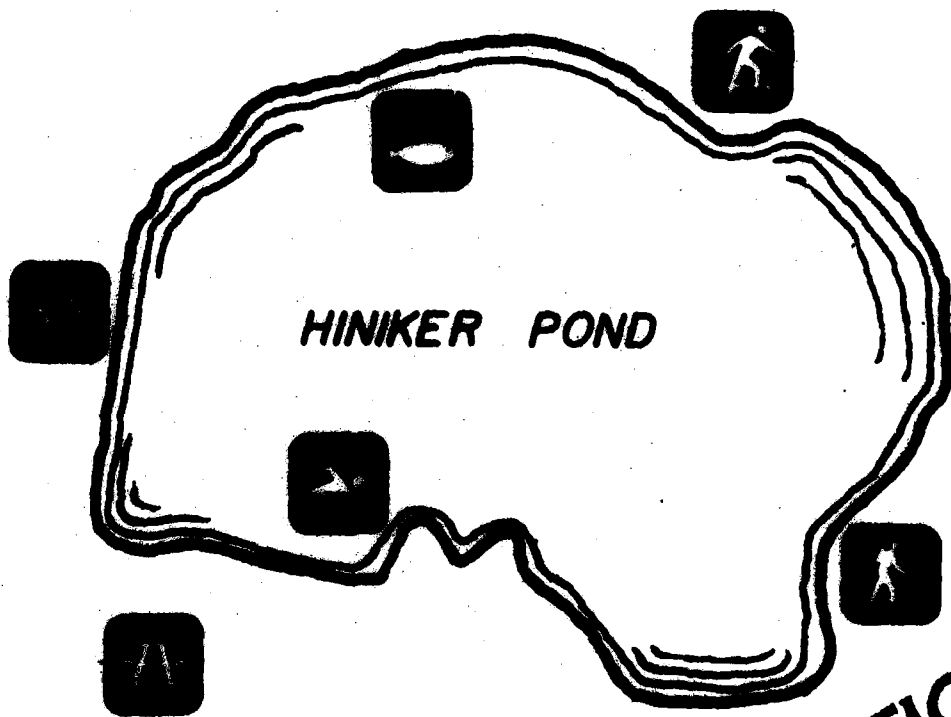
Minnesota River  
Mankato

~~OR FOR FILE~~

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FINAL SUPPLEMENT  
FINAL ENVIRONMENTAL IMPACT STATEMENT  
MINNESOTA RIVER, MINNESOTA  
MANKATO-NORTH MANKATO-LE HILLIER  
FLOOD CONTROL-PHASE I  
RECREATION DEVELOPMENT PLAN

ADA 120874



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DEPARTMENT OF THE ARMY  
St. Paul District, Corps of Engineers  
1135 U.S. Post Office and Custom House  
St. Paul, Minnesota 55101

January 1980

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This project is one stage in a multi-contract flood control project for the area. This supplement discusses project-associated recreational development formulated after filing of the EIS, specifically a picnic/beach area on the south side of Hiniker Pond with related facilities. ↗		

FINAL SUPPLEMENT  
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 MINNESOTA RIVER, MINNESOTA  
 MANKATO-NORTH MANKATO-LE HILLIER  
 FLOOD CONTROL-PHASE I  
 RECREATION DEVELOPMENT PLAN

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FINAL SUPPLEMENT  
FINAL ENVIRONMENTAL IMPACT STATEMENT  
MINNESOTA RIVER, MINNESOTA  
MANKATO-NORTH MANKATO-LE HILLIER  
FLOOD CONTROL - PHASE I  
RECREATION DEVELOPMENT PLANS

1.00 PROJECT DESCRIPTION

Location

1.01 The proposed recreational development is located along the Minnesota River on the northern edge of the city of Mankato, Minnesota, and immediately west of the intersection of U.S. Highway 169 and Minnesota Highway 14. The project location is shown in Plate 1.

Authorization

1.02 The flood control project on the Minnesota River at Mankato-North Mankato, Minnesota, Stage 4, is being developed in response to the Flood Control Act of 1958 (Public Law 85-500), approved 3 July 1958. The recreation development project at Hiniker Pond, Mankato, is being developed in response to Section 4 of the Flood Control Act of 1944, Section 207 of the Flood Control Act of 1962, and Public Law 89-72, as amended.

Background

1.03 The flood control plan for the Lake Street watershed is outlined in the Final Environmental Impact Statement, dated 18 January 1972, and in Supplement No. 1 to Design Memorandum No. 6, dated 31 July 1978. This project is one stage in a multi-contract flood control project. The first contract in the project was awarded in August 1970, and completion of the entire project is scheduled for fall 1981. The purpose of this supplement is to discuss project-associated recreational development which was formulated subsequent to the filing of the original environmental impact statement.

Proposed Action

1.04 Recreation Facilities - A post-authorization change for recreation, dated 27 June 1977, has been approved and authorizes recreation for the entire Mankato-North Mankato-Le Hillier Flood Control Project. Local interests have expressed their interest in recreation for Mankato Stage 4 Flood Control and have passed a resolution declaring their intentions concerning local participation. Their resolution was passed prior to obtaining accurate cost information. The City has been informed of the higher cost and still desires to proceed with the recreation development.

1.05 Public Law 89-72 (Federal Water Projects Recreation Act), established in 1959 and amended in 1962, requires that recreation development be considered at every Corps water resource project. Corps policy also states that the objective of Corps recreation resource activities is to insure continued public enjoyment and maximum sustained use of lands, waters, forests, and associated recreational resources, consistent with their carrying capacity and their aesthetic and biological values. Corps policy which applies to these proposed recreation developments requires that a non-Federal

entity assume responsibility for 50 percent of the cost of development, and operate, maintain, and replace facilities at the development. The city of Mankato has expressed interest in serving as the non-Federal sponsor (Exhibit 1).

### The Site Plan

1.06 The proposed conceptual site plan (Plate 1) has been reviewed and agreed to by the non-Federal sponsor (the city of Mankato). The major recreation facilities proposed in this final site plan include a picnic/beach area on the south side of the pond, with 20 picnic tables placed along the western end of the south shore. The beach would be of sand and about 50 feet wide and 200 feet long. An access road from U.S. 169 would lead to a paved parking area for 67 cars in the south shore area. Waterborne restrooms and a change house are also planned for this area. Landscape buffers of trees and shrubs are proposed along the northern and eastern shorelines because of the industrial and transportation networks in these areas. As a result, the more pastoral atmosphere which currently exists on adjacent lands west of the pond would be maintained.

### Project Costs

1.07 The total estimated cost of the proposed recreation facilities associated with the Stage 4 - Mankato Flood Control Project is \$303,300 (50 percent local non-Federal sponsor). Project costs have been updated as of January 1980. See Exhibit 2 for detailed cost breakdown.

1.08 The cost of operations, maintenance, and replacement of the proposed facilities is anticipated to be \$3,780 annually.<sup>1</sup>

1.09 The average annual recreation costs are based on construction first costs (\$303,300) plus interest during construction (3 1/8 percent). The interest and amortization rate over the life of the project (.03276) are applied to this cost yielding \$9,936 annual charges for construction. Total average annual costs are then determined by adding the annual charges for construction and the annual costs for operations, maintenance, and replacement: \$9,936 + \$3,780 = \$13,716.

### Project Benefits

1.10 The anticipated average net annual visitation (11,705 recreation days) can be utilized to develop the average annual discounted benefits of \$16,800.00. Project benefits have been updated as of January 1980. (See Exhibit 6 for calculations.)

### BENEFIT-COST RATIO

1.11 The benefit-cost ratio for the proposed recreation development is derived from dividing the average annual benefits by the average annual recreation costs. The benefit cost ratio has been updated as of January 1980.

$$\frac{\$16,800 \text{ (Benefits)}}{\$13,716 \text{ (Costs)}} = 1.22$$

This benefit-cost ratio is greater than unity and therefore the proposed recreation development is economically feasible.

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<sup>1</sup>This figure is derived by assuming an annual cost of \$.50 per average annual recreation day (\$.50 X 11,440 average annual recreation days = \$5,720.00).

## 2.00 EXISTING ENVIRONMENTAL SETTING

### Access

2.01 The site is accessible by vehicle via U.S. Highway 169 and Minnesota Highway 14. Lind Avenue, which is located immediately to the north, provides the secondary street enabling direct access to the proposed recreation site.

### Geologic, Topographic, and Land-Use Data

2.02 The proposed site consists of a 45-acre tract of land acquired for the project for purposes of interior drainage. The site has been formed by alluvial sand and gravel deposits from the Minnesota River.

2.03 The proposed site is located on the former floodplain of the Minnesota River. The floodplain is now certified protected to a 1-percent chance level flood, and is to be protected when the Minnesota River, Minnesota, Mankato-North Mankato-Le Hillier Flood Control Project is complete to a standard project flood of 0.3-percent chance occurrence.

2.04 This site and the surrounding area are characteristically flat and lined by wooded, steep, rocky slopes. However, the quarrying which resulted in the creation of Hiniker Pond, along with the recent construction of U.S. Highway 169 and Minnesota State Highway 14 on the emergency flood protection levees, has altered this characteristically flat terrain. The landscape at and near the project site can now be classified as gently rolling, with wooded, steep, rocky slopes lining the river valley.

2.05 Land around the proposed site is zoned as heavy industrial, light industrial, general commercial, residential, and agricultural. There is an old landfill to the south and transitional, unzoned lands surrounding the site. Zoning modification of surrounding lands would be advisable if recreation development occurs. As a minimal measure, the careful planning and location of proposed facilities will help eliminate land-use conflicts which could result from crowding of dissimilar land uses.

2.06 Hiniker Pond is an abandoned gravel pit located within the designated ponding area for interior drainage. The pond has a surface area of 18.4 acres, a maximum depth of 23 feet, a mean depth of 9 feet, and a total volume of 136 acre-feet. With no inlets or outlets and a land drainage area of about 4 or 5 acres, it is fed primarily by groundwater and effectively isolated from the surrounding urban watershed. The pond is not officially sanctioned as a recreation area but has been used extensively as such for many years.

2.07 Immediately to the west and south of Hiniker Pond are the remains of an old oxbow (originally a channel of the Minnesota River). This old oxbow is approximately 14.4 acres in size and is intermittently wet. It provides stormwater ponding for the Lake Street drainage area.

## Water Quality Data

2.08 Limited preliminary water quality studies conducted by interested Mankato State University researchers indicate that the water quality of Hiniker Pond is excellent for recreation use. Fecal coliform bacteria density, a key parameter in determining the quality of water, is very low in Hiniker Pond (6 per 100 ml), and the water is therefore safe for swimming and fishing (up to 200 per ml is considered a safe fecal coliform count for swimming waters).

2.09 Studies show that water contained in the old oxbow exceeds the allowable contamination health standards for water recreational uses (approximately 600 coliforms per ml). The reason for the poor water quality in the oxbow is that its water source is storm runoff and much of this contaminated runoff is further polluted when it passes through and/or over an existing sanitary landfill.

## Biological Resources

2.10 Natural vegetation within the project area is sparse due to agricultural, recreational, and commercial use of the area. A mixture of successional trees and shrubs occurs around the pond. The vegetation of the oxbow is of a wet or dry disturbed marsh type, depending on the season and rainfall amounts. Other existing vegetation types occurring in the project are cultivated pasture and a small amount of riparian vegetation at the riverbank.

2.11 Fish and wildlife within the study area are few in both number and diversity. The scarcity of wildlife within the area is probably the result of various influences, including urbanization of the surrounding areas and agricultural and recreational use of the project area. Species common in this type of urban habitat include gray squirrel (Sciurus carolinensis), cottontail rabbit (Sylvilagus floridanus), raccoon (Procyon lotor), and skunk (Mephitis mephitis). Frogs and snakes may be found along the riparian zone where vegetation has endured. Fishery resources of the pond have not been surveyed but are probably limited to small panfish, such as crappie, bluegill, and largemouth bass.

2.12 The Great Lakes Region "Red Book" for threatened and endangered species, published by the United States Department of the Interior Fish and Wildlife Service, has been consulted for information on threatened and endangered species. Revised copies, dated 15 November 1979, of listed and proposed species for the State of Minnesota revealed no threatened or endangered species in the area.

## Cultural Resources

2.13 In compliance with Executive Order 11593 and the National Historic Preservation Act of 1966, the most recent listing of the National Register of Historic Places has been consulted. As of 23 November 1979, there are no properties included on or determined eligible for the National Register that would be affected by the proposed recreation development.

2.14 In August 1978 an archeological survey was conducted by a qualified, inhouse archeologist in order to locate previously unknown cultural resources. While the Minnesota River Valley is known to have a high potential for archeological sites, none were discovered within the fairly limited area of this project. The area was surveyed using both pedestrian survey and subsurface testing techniques. Results of the survey were negative, possibly due to the great amount of disturbance that occurred in the area in the past. Should any previously undetected cultural remains be encountered during construction, these remains shall be left undisturbed until their significance can be determined.

2.15 Copies of the Cultural Resources Report and the professional qualifications of the Principal Investigator are available from the St. Paul District Office upon request. Site location will be removed from reports distributed to the general public in accordance with ER 1105-2-460.

## General Socioeconomic and Population Factors

2.16 The proposed recreation site is currently receiving unauthorized recreation use. The users are generally college and high school students.

2.17 Non-facilitated swimming and picnicking (i.e., partying) are the most common activities, but fishing is also relatively popular, and fishermen sometimes catch stringers of small panfish from Hinkler Pond. Boating and scuba diving are also secondary activities at the pond. The estimated average annual use attributable to the area without facility development in activity occasions is 1150.<sup>1</sup>

## Recreation Market Area (Zone of Influence)

2.18 Because Hinkler Pond and the adjoining project lands are restricted in size and limit the extent of recreation development, most people who use the site are not expected to come from outside the cities of Mankato and North Mankato. Therefore, the market area<sup>2</sup> has been assumed to be the cities of Mankato and North Mankato.

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<sup>1</sup> Calculations of use assumed 16-week recreation season, 60 percent of use occurring on weekends; recreational use would remain constant without changes in existing facilities over the life of the project. Conservative estimates of use were made after talking with local users and parks and recreation staff.

<sup>2</sup> The market area is the geographic area from which 90 percent of the use will originate.

2.19 Residents from within the market area are generally urbanites, and many are college and high school students. Residents of the area have an effective buying income which exceeds the national average, and their per capita savings are among the highest in the United States.<sup>1</sup>

2.20 The historical populations within the market area are shown in Table 1.

TABLE 1 - HISTORICAL POPULATION OF MARKET AREA

	1950	1960	1970
Mankato	18,809	23,797	30,895
North Mankato	4,788	5,927	7,347
Total Population	23,597	29,724	38,242

Source: U.S. Census Reports

2.21 According to the U.S. Census figures, the annual percent of increased population in the Mankato area has risen consistently, from approximately 0.5 percent annually in the 1930's to approximately 3.0 percent annually in the 1960's. This population increase trend is expected to continue in the future.<sup>2</sup>

### 3.00 IMPACTS OF THE PROPOSED ACTION

#### Environmental Effects

##### Natural Resources Impacts

3.01 Water Quality Impacts - Recreation development would not have a major impact on water quality. With no inlets or outlets and a land drainage area of about 4 or 5 acres, Hilder Pond is fed primarily by groundwater and is effectively isolated from the surrounding urban watershed. It is currently maintaining its good water quality levels even while being used as an unsanctioned recreation area, and without the benefit of the bathhouse facilities proposed by the plan. In the unlikely event that the water does become polluted due to unforeseen circumstances, the pond could be pumped dry and recharged by the groundwater.

##### Biological Impacts

3.02 Vegetation - Construction activities associated with the plan would have adverse effects on existing vegetation. The effects would be minor,

<sup>1</sup>Data derived from SCORP data.

<sup>2</sup>Data derived from MRP & ...

however, because the area presently supports a low density population of successional woody and herbaceous species. Vegetation loss would also be mitigated by the landscaping included in the plan for recreation development.

3.03 Wildlife - There would be no significant effect on wildlife due to construction of the project because of the low density of resident species and already sparse habitat in the area. As discussed in paragraph 2.12, the project would have no effect upon threatened or endangered species.

3.04 Air Quality - Other than some minor contributions from construction equipment and vehicles of those utilizing the recreation facilities, the project would have no significant impacts on air quality.

3.05 Man-made Resources - The gravel pit (Hiniker Pond) is the only man-made resource in the project area. Impacts on this resource are discussed throughout this section.

#### Economic Impacts

3.06 The local economy, including the labor force and business activity, would be slightly stimulated during construction. The project may have a slight beneficial impact on property values because of the development of the project lands. The project would have a slight negative impact on local tax revenues by removing the project lands from the tax rolls and making them public. The project would have no significant impacts on regional growth, and no displacement of farms would occur.

#### Impacts on Existing Land Use

3.07 The proposed recreation project conforms with both existing land use and objectives of local land use policies. The area is currently used as an unofficial recreation area, and the local agencies have declared their intentions concerning participation in recreation development of the area (see Exhibit 1).

3.08 Construction of the recreation development would temporarily disrupt use of the facilities and cause an inconvenience to the public. These impacts would be of short duration and would be eliminated upon completion of the project, when use of the area would be enhanced.

#### Impacts on Public Services

3.09 The recreation development would have a minor adverse impact on local traffic. Most users of the area would travel down U.S. Highway 169 and its associated frontage road. At peak times of arrival and departure, congestion could be a problem at the access of the frontage road to U.S. Highway 169.

3.10 Social Effects - The project would cause no displacement of people, as no people live on project lands. The project would have a positive impact on community cohesion because the project lands are urban, ribbon-like in configuration, and restrictive in size, and most recreationists who use the site are expected to originate from the Mankato-North Mankato urban area. The project should have no significant impact on community growth because of its restrictive size relative to the large urban base of the market area.

#### Recreation Impacts

3.11 The project would have a significant impact on recreation. Use would increase significantly and the quality of the recreation experience would be enhanced because of the proposed developments.

3.12 The facility design load that can be accommodated by the resource and the proposed facility development on a given day during the recreation season is 1,015 activity occasions. (See Exhibit 4 for calculations.)

3.13 Facility design load is not expected to be reached or exceeded more than a few times every year. However, the facility design load can be used to derive the anticipated net average annual visitation of 11,705 recreation days (See Exhibit 5 for details and Exhibit 3 for comparison with existing conditions.)

#### 4.00 ALTERNATIVES

##### Alternative 1 - No Action

4.01 If the no action alternative were chosen, no plan for recreation development would be implemented.

##### Impacts of the No Action Alternative

4.02 Water Quality - Water quality would not change significantly in Hiniker Pond or the oxbow.

4.03 Biological - There would be no significant biological impacts with the no action alternative.

4.04 Aesthetic - Hiniker Pond would remain an unsanctioned recreation area. Litter and abuse of the natural landscape would have a negative impact on the aesthetic value of the area.

4.05 Recreation - The area would continue to be used as an unsanctioned recreation area with no significant change.

4.06 Economic - There would be no appreciable economic impact.






4.07 Social - The proposed recreation site is currently receiving unauthorized recreation use by local college and high school students. Population, recreation needs, and use of the proposed site are expected to increase in the future.<sup>1</sup> Without site planning, the area might become crowded and the recreation experience would be less desirable to the users.

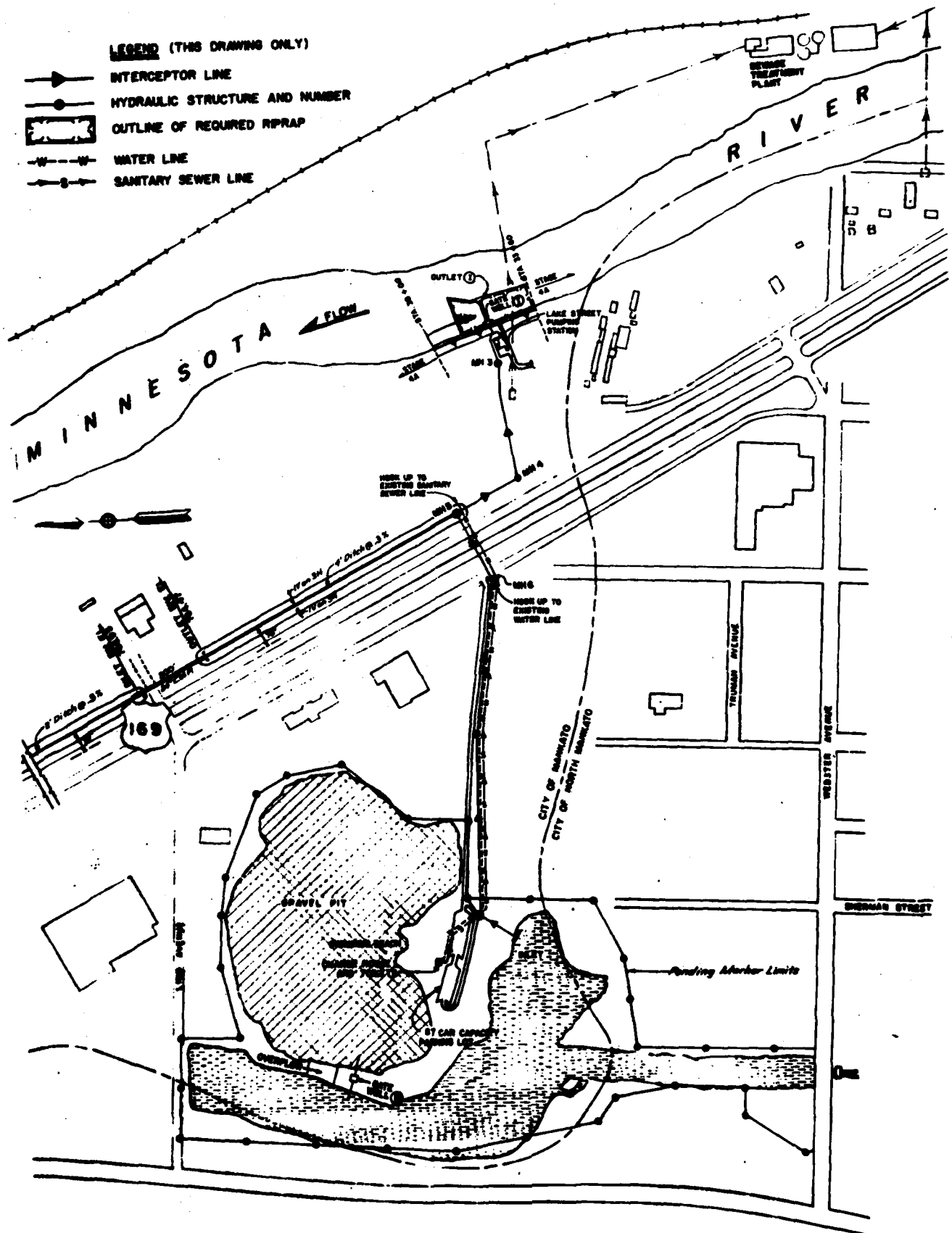
<sup>1</sup>Data derived from SCORP data.

## 5.00 COORDINATION

5.01 The city of Mankato requested the planning for recreational development for the Mankato area flood control project (see Exhibit 1). Preliminary drafts of this analysis in the form of an assessment and a draft supplement have been sent to the U.S. Department of the Interior, Fish and Wildlife Service (FWS); U.S. Environmental Protection Agency (EPA); Minnesota Department of Natural Resources (MDNR); and the Minnesota State Historic Preservation Officer (SHPO), for their review. The FWS, EPA, SHPO, and MDNR sent replies (see Exhibits 7-14).

**LEGEND (THIS DRAWING ONLY)**

-  INTERCEPTOR LINE
-  HYDRAULIC STRUCTURE AND NUMBER
-  OUTLINE OF REQUIRED RIPRAP
-  WATER LINE
-  SANITARY SEWER LINE



**GENERAL NOTES:**

1. ELEVATIONS REFER TO M. S. L. (1929 ADJ.)
2. POWER AND TELEPHONE LINES WILL BE RELOCATED BY OTHERS AS REQUIRED.
3. COORDINATES AND GRIDS ARE NORTH MANKATO SYSTEM.





# MANKATO

202 EAST JACKSON STREET - PHONE 507-625-3161  
P.O. Box 328 MANKATO, MINNESOTA 56001

December 8, 1976

Colonel Forrest T. Gay, III  
District Engineer  
1217 U.S. Post Office & Custom House  
St. Paul, MN 55101

Dear Colonel Gay:

Re: Recreational Facilities for Mankato Flood Control Project

The City of Mankato formally requests the planning for recreational development for the entire flood control project related to the Mankato area. We have currently requested this action by your agency on specific stages but we would like to expand on that more specifically for stage 4, which is currently in the final planning stage prior to construction. I request that this planning be compatible with all planning performed by state and local agencies.

The City of Mankato understands that the local responsibility would include cost sharing for development of the recreation facilities as well as maintaining the facilities after they have been constructed. If you need additional data, such as specific resolutions from the City Council, we would be pleased to provide these at a later date.

Should you have any questions or we may be of assistance, please advise.

Sincerely,

CITY OF MANKATO

  
Paul Baker  
Director of Public Works

1

EXHIBIT 2 - DETAIL COST ESTIMATE

	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
<b>A. Beach Area</b>				
Sand Fill	Job	Sum	*	\$ 1,150.00
Earth Work	Job	Sum	*	8,000.00
Beachhouse and Restrooms	Job	Sum	*	65,000.00
Contingencies				6,100.00
<b>Total Beach Area</b>				<u>\$80,250.00</u>
<b>B. Picnic Area</b>				
Picnic Tables	Each	20	\$175.00	\$ 3,500.00
Trash Receptors	Each	10	25.00	250.00
Contingencies				400.00
<b>Total Picnic Area</b>				<u>\$ 4,150.00</u>
<b>C. Parking Area</b>	Job	Sum	*	\$ 11,000.00
Contingencies				2,000.00
<b>Total Parking Area</b>				<u>\$ 13,000.00</u>
<b>D. Access Roads</b>				
Bituminous 24'	LF	1,000	\$35.00	\$ 35,000.00
Bituminous 12'	LF	380	18.00	6,840.00
Bike Trail 8' (Bituminous)	LF	3,000	12.00	36,000.00
Walkway 4' (Bituminous)	LF	3,750	6.00	22,500.00
Contingencies				11,160.00
<b>Total Access Roads</b>				<u>\$111,500.00</u>
<b>E. Landscaping</b>	Job	Sum	*	\$ 7,000.00
Contingencies				1,000.00
<b>Total Landscaping</b>				<u>\$ 8,000.00</u>
<b>F. Additional Lands Needed for the Recreation Development     (includes 15% cont.)</b>				<u>\$ 20,000.00</u>
<b>SUB-TOTAL COST</b>				\$236,900.00
<b>ENGINEERING AND DESIGN</b>				\$ 30,800.00
<b>SUPERVISION AND ADMINISTRATION</b>				
Inspection				\$ 19,000.00
Overhead				<u>16,000.00</u>
<b>TOTAL COST</b>				<u><u>\$303,300.00</u></u>

EXHIBIT 2

**EXHIBIT 3**  
**DETERMINATION OF RECREATION USE WITHOUT PROPOSED**  
**RECREATION DEVELOPMENT**

**Assumptions:**

- a. 16-week recreation season
- b. 60 percent of use occurs on weekends
- c. 2.5 activity occasions equal one recreation day
- d. Existing recreation use will remain constant over the life of the project.

Non-facilitated existing use of the site includes these activities and estimated annual visitations:

a. fishing	190 activity occasions
b. swimming	500 activity occasions
c. Boating	40 activity occasions
d. Picnicking (parties)	400 activity occasions
e. Scuba diving	<u>20 activity occasions</u>

Estimated existing annual use in activity occasions      1,150 activity occasions

By applying a 2.5 conversion factor to activity occasions, the existing recreation use in recreation days can be calculated:

$1,150 \div 2.5 = 460$  recreation days use attributable to the existing site without facility development.

EXHIBIT 3  
DAILY FACILITY DESIGN LOAD CALCULATIONS

Instant optimal capacity assumptions:

- 4 bicyclists/entire walkway (within project lands)
- 4 pedestrians/walkways (within project lands)
- 3.5 persons/car for swimmers and sunbathers
- 4.5 persons/picnic unit
- 4.5 persons/car for picnickers
- 3.0 persons/car for fishermen
- 2.5 turnover factor for picnicking
- 10.0 turnover factor for sightseeing
- 3.0 turnover factor for fishing
- 2.5 turnover factor for swimming
- 40.0 turnover factor for bicycling
- 15.0 turnover factor for walking for pleasure

Given Development:

- 20 picnic units
- 65 car parking stalls
- 1 beach house and restrooms
- 3,000 lin. foot bikepath
- 3,750 lin. foot walkway
- 200 lin. foot beach

Formula followed to determine Facility Design Load:

(units of facility) X (persons/activity) X (turnover rate) =  
Facility Design Load

for swimming and sunbathing	(40 X 3.5 X 2.5) =	350
for picnicking	(20 X 4.5 X 2.5) =	225
for fishing	(1 X 3 X 3)	= 9
for sightseeing (people watching	(4 X 3.5 X 10)	= <u>140</u>
Parking Related Load Subtotal		724

40 percent of use is expected to trail related and/or neighborhood oriented use (i.e., non-parking oriented use). Therefore a 40 percent increase in visitation can be applied to the parking related load calculation. 290

Total Daily Facility Load 1,015

Assuming 2.5 activity occasions = 1.0 recreation days, the total Daily Facility Design Load attributable to the proposed project is approximately 405 recreation days.

**EXHIBIT 5**  
**DETERMINATION OF AVERAGE ANNUAL RECREATION DAYS**  
**ATTRIBUTABLE TO THE PROPOSED RECREATION DEVELOPMENT**

**Assumptions:**

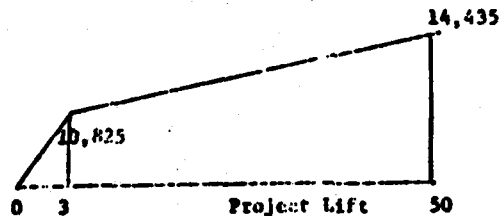
- 10 percent of activity use occurs outside span of recreation season
- 16-week recreation season (mid-May to mid-September)
- 60 percent of use will occur on weekends
- 2.5 activity occasions equal one recreation day
- Initially the development will receive 75 percent of the Daily Facility Design Load on weekends. Ultimately the development will accommodate 100 percent of the Daily Facility Design Load on weekends.
- Formula for determination of annual visitation:

(50 percent facility design load X 1/2 weekend days during recreation season) +  
 (100 percent facility design load X 1/2 weekend days during recreation season) X  
 (Proportion of total recreation use which occurs on weekends) X  
 (Increased by percentage of use which occurs outside of the recreation season) +  
 (No. of activity occasions per recreation day) =  
 Annual visitation in recreation days.

Initial:  $(8,120) + (16,240) \times \frac{100}{90} + (2.5) = 10,825$  initial annual recreation days.

Ultimate:  $(16,240 \times 2) \times \frac{100}{90} + (2.5) = 14,435$  ultimate annual recreation days.

AVERAGE ANNUAL VISITATION IS CALCULATED AS FOLLOWS:



By using standard economic equivalency calculations, the following figures are derived:

Total visitation	609,845 recreation days
Average annual visitation	12,195 recreation days

The net visitation attributable to the proposed recreation development is calculated by subtracting the visitation currently occurring at the project site (see exhibit 3) from the visitation anticipated if the recreational development is completed.

12,195

460

11,705 net average annual visitation  
 in recreation days

EXHIBIT 6  
DETERMINATION OF DISCOUNTED AVERAGE ANNUAL BENEFITS

**Assumptions:**

Interest rate of 3 1/8 percent

50-year project life

.96175 discounting factor

The discounted net recreation benefits can be derived by multiplying the net annual project visitation by the appropriate discounting factor and then applying a unit value per recreation day (\$1.50<sup>1</sup>).

By following this standard economic procedure the average annual discounted recreation benefits were calculated to be \$16,800.00

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<sup>1</sup> \$1.50 per recreation day was considered to be an appropriate unit value due to the quality of the Miniker Pond setting and the quality of the proposed recreation facilities. The Water Resources Council has established a range of \$.75 to \$2.25 for general recreation. The total recreation experience provided by the project is worthy of the median value of \$1.50 unit value per recreation day.



157-11 Minnesota Department of Natural Resources  
Transmittal Report 157-11-10

## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
TWIN CITIES AREA OFFICE  
530 Federal Building and US Court House  
316 North Robert Street  
St. Paul, Minnesota 55101

IN REPLY REFER TO:

05.16.73

Colonel Forrest T. Gay, III  
District Engineer  
U.S. Army Corps of Engineers  
St. Paul District  
1135 U.S. Post Office & Custom House  
St. Paul, Minnesota 55101

Dear Colonel Gay:

This regards the Corps' Environmental Assessment of the Recreational Development Plans (revised) for Stage 4 Flood Control at Mankato-North Mankato- Le Hillier, Minnesota.

We have reviewed the assessment as requested and find that it adequately addresses the potential impacts of the preferred as well as alternative Recreational Development Plans on local fish and wildlife resources.

Sincerely yours,

*John W. Bekeris*  
George G.P. Bekeris  
Area Manager



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
230 SOUTH DEARBORN ST  
CHICAGO, ILLINOIS 60604

10/17/78

Mr. Roger G. Fast  
Chief, Engineering Division  
U.S. Army Engineer District, St. Paul  
1135 U.S. Post Office and Custom House  
St. Paul, Minnesota 55101

Dear Mr. Fast:

Thank you for your letter of October 17, 1978, transmitting the assessment of the Recreational Development and Stage 4 Flood Control, Minnesota River, Minnesota at Mankato-North Mankato-Le Hillier. Due to our limited resources and current work load, it is not possible for us to review all the technical reports received by our office. Consequently, if you do not receive a comment letter from us by the date requested, you may assume we will have not reviewed the above report.

We appreciate your cooperation. Please keep us informed about the subject project as other developments may occur.

Sincerely yours,

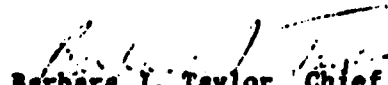
  
Barbara J. Taylor, Chief  
Environmental Impact Review Staff  
Office of Federal Activities

EXHIBIT 8



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
210 SOUTH DEARBORN ST  
CHICAGO, ILLINOIS 60604

JAN 17 1979

Mr. Roger G. Fast  
Chief, Engineering Division  
U.S. Army Engineer District, St. Paul  
1135 U.S. Post Office and Custom House  
St. Paul, Minnesota 55101

Dear Mr. Fast:

Reference is made to your letter of December 8, 1978, requesting a clarification of the review status of the environmental assessment for Flood Control, Minnesota River, at Mankato-North Mankato-Le Hillier, Minnesota. Due to our present workload, we will not be able to comment on this assessment. We do wish to be involved in the project as additional reports are prepared, or as issues develop, and, we expect to be able to become involved in more detail at a later time.

In regard to future assessments for which you request our review, you should not assume we will not be providing comments. We will review future assessments on a case-by-case basis as our work load permits; and notify you of our views and comments or our inability to review the assessment at that time.

Thank you for the opportunity to clarify this matter.

Sincerely yours,


  
Barbara J. Taylor, Chief  
Environmental Impact Review Staff  
Office of Federal Activities

EXHIBIT 9

**COUNCIL FOR MINNESOTA ARCHAEOLOGY**

OFFICE OF THE STATE ARCHAEOLOGIST  
MILLING UNIVERSITY  
ST. PAUL, MINNESOTA 55101

March 29, 1979

Col. Forrest T. Gay III, District Engineer  
Corps of Engineers, St. Paul District  
U. S. Post Office Building  
St. Paul, Minnesota 55101

Re: Draft Supplement, Final Environmental Impact Statement  
Minnesota River, Minnesota  
Mankato-North Mankato-Le Hillier Flood Control - Phase I  
Recreation Development Plans

Dear Colonel Gay:

Regarding the above supplement, upon receipt of "An Archeological Survey of a Proposed Pumping Station and Outflow Line in Mankato, Minnesota" by Philip Salkin of your staff, we have reviewed this project.

Based on Mr. Salkin's report, a no effect declaration on archeological resources in the immediate project area can be assigned.

Sincerely,



Christy A. H. Uaine  
State Archaeologist

cc: Russell Arisley  
Susan Queripel

STATE OF  
MINNESOTA  
DEPARTMENT OF NATURAL RESOURCES  
BIENNIAL OFFICE BUILDING • ST. PAUL, MINNESOTA • 55155

April 9, 1979

DNR INFORMATION  
(612) 296-6157

Colonel Forrest T. Gay, III  
District Engineer - St. Paul District  
U.S. Army Corps of Engineers  
1135 U.S. Post Office and Custom House  
St. Paul, Minnesota 55101

Dear Colonel Gay:

The Minnesota Department of Natural Resources (MDNR) has reviewed the draft supplement to the final environmental impact statement (EIS) for the Minnesota River, Minnesota, Mankato - North Mankato - Le Hillier Flood Control - Phase I, Recreation Development Plans.

The MDNR finds the supplement acceptable and we support the project as stated in our letter of November 13, 1978.

Thank you for the opportunity to review this document.

Sincerely,

  
Vonny Hagen  
Assistant Commissioner for Planning

VH: rlh  
cc: Maynard Nelson  
Frank Knoke  
Charlotte Cohn

EXHIBIT 11



STATE OF  
**MINNESOTA**  
**DEPARTMENT OF NATURAL RESOURCES**  
CENTENNIAL OFFICE BUILDING • ST. PAUL, MINNESOTA • 55155

DNR INFORMATION  
(612) 296-6157

November 13, 1978

Roger G. Fast  
Chief, Engineering Division  
Department of the Army  
St. Paul District, Corps of Engineers  
1135 U.S. Post Office and Custom House  
St. Paul, Minnesota 55101

Dear Mr. Fast:

The Minnesota Department of Natural Resources has reviewed the preliminary environmental assessment of Recreational Development and Stage 4 Flood Control, Minnesota River, Minnesota at Mankato - North Mankato - Le Hillier.

Based upon this review by several of our concerned Divisions, we concur with your Negative Declaration finding.

We support this project as it will improve local recreational opportunities while increasing storm water storage capacity.

Thank you for the opportunity to review and comment on this project.

Sincerely,

Joseph N. Alexander  
Acting Commissioner

EXHIBIT 12



UNITED STATES  
 ENVIRONMENTAL PROTECTION AGENCY  
 REGION V  
 221 SOUTH DEARBORN ST.  
 CHICAGO ILLINOIS 60604

RESPONSE

The parking lot is designed so that runoff is diverted away from Hiniker Pond and into the oxbow.

19 APR 1979

Colonel Forrest J. Gay, III  
 District Engineer  
 U.S. Army Engineer District, St. Paul  
 1133 U.S. Post Office and Custom House  
 St. Paul, Minnesota 55101

RE: 79-019-194

Dear Colonel Gay:

We have completed our review of the Draft Supplement to the Final Environmental Impact Statement (EIS) for Flood Control, Minnesota River, Mankato-North Mankato-Le Hillier, Minnesota. Based upon our review of this draft supplement, we do not have any objections to the project's implementation. The information provided was sufficient to determine the project as planned would have minimal impact.

Part of the plan includes a 67 car parking area. Runoff from this area should be diverted away from Hiniker Pond. The runoff from the parking can contain several different pollutants, including oil and grease, lead asbestos, etc. which may need treatment or adversely affect Hiniker Pond.

Based upon our review of the draft supplement, we have rated the project 10 (lack of objection) and classified the draft supplement as Category 1 (sufficient information). The date and classification of our comments will be published in the Federal Register in accordance with our responsibility to inform the public of our views of other agencies' projects.

We recommend that the new Council on Environmental Quality's Regulations for EIS preparation be followed when preparing the Final Supplement. These new regulations found in Section 1503.4(c) of the November 29, 1978, Federal Register state that where feasible just the comments and responses be written on errata sheets and attach them to the Draft EIS instead of rewriting the entire EIS. This project provides an opportunity to implement these new regulations. We appreciate the opportunity to review this draft supplement. When the Final is filed with the Office of Environmental Review in Washington, D.C., please forward three copies to us.

Sincerely yours,

Barbara J. Taylor, Chief  
 Environmental Impact Review Staff  
 Office of Federal Activities



United States Department of the Interior

OFFICE OF THE SECRETARY  
NORTH CENTRAL REGION  
174 WEST JACKSON BOULEVARD  
CHICAGO, ILLINOIS 60604

ER 79/237

RESPONSE

As shown on Plate 1, the project's water-borne restrooms would be connected to both the city sewer and water supply systems.

April 23, 1979

Colonel Forrest T. Gay III  
District Engineer  
U.S. Army Engineer District  
St. Paul  
1735 U.S. Post Office & Custom House  
St. Paul, Minnesota 55101

Dear Colonel Gay:

The Department of the Interior has reviewed the draft supplement to the final environmental statement for the Minnesota River at Mankato - North Mankato, Flood Control, Phase I Recreation Development Plan, Blue Earth County, Minnesota as requested in your letter of March 7, 1979. Our comments are as follows.

The proposed action would have no effect on any unit of the National Park System or affiliated area.

Development of the planned recreation area would not significantly alter the availability of mineral resources.

The manner of waste disposal for the water-borne restrooms should be addressed. The supplement also should comment on the probable source of drinking water for the recreational development and, if appropriate, on measures that would ensure good quality drinking water for public use.

The proposed recreation development is in accord with the current Minnesota State Comprehensive Outdoor Recreation Plan.

Thank you for this opportunity to review and comment on the subject draft supplement.

Sincerely yours,

*David L. Jervis*  
David L. Jervis  
Regional Environmental Officer