REVISION OF MASTER PLAN FOR RESOURCE MANAGEMENT

POOLS 11-22
9-FOOT CHANNEL NAVIGATION PROJECT

CHAPTER VII
THE MISSISSIPPI RIVER
POOL 16

U. S. ARMY ENGINEER DISTRICT, ROCK ISLAND
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS
OCTOBER 1969

7

NCDPD-ER (22 May 70) 2nd Ind
SUBJECT: Revision of Master Plan for Resource Management, Upper Mississippi River, Pools 11-22, Nine-Foot Channel Navigation Project

DA, North Central Div., Corps of Engineers, 536 S. Clark St., Chicago, Illinois 60605 26 Jan 1971

TO: District Engineer, Rock Island

Forwarded for appropriate action.

FOR THE DIVISION ENGINEER:

James W. Gilland

JAMES W. GILLAND
Colonel, Corps of Engineers
Deputy Division Engineer for
Civil Functions

DEPARTMENT OF THE ARMY
NORTH CENTRAL DIVISION, CORPS OF ENGINEERS
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605

NCDPD-ER

22 May 1970

SUBJECT: Revision of Master Plan for Resource Management, Upper Mississippi River, Pools 11-22, Nine-Foot Channel Navigation Project

Chief of Engineers
ATTN: ENGCW-PV

1. Chapters IV, V, VI and VII of the subject master plan (Pools 13, 14, 15 and 16) are forwarded, recommending approval, subject to the following comments.

2. The land use zoning and forestry management objectives indicated on the plastic overlays with the base maps are important features of this master plan. These overlays provide guides for achieving rational long range resource management on project lands and waters. Preparation of these land use zoning and forestry management overlays involved detailed analysis of resources and extensive coordination efforts which warrant special mention in the narrative portion of the plan. As indicated in Chapter I, General Information, the last chapter of the master plan, Chapter XIV, will contain a summary of the complete master plan. Chapter XIV should contain a section to emphasize the fact that the most significant long range value of this master plan can be realized through appropriate implementation of the land use zoning and forestry management features of the plan.

3. The chapters of the master plan covering the individual pools do not present sufficient data on recommended recreational facility expansion. It is suggested, therefore, that Chapter XIV should provide a consolidated detailed analysis of all works specifically recommended in Pools 11 thru 22, to include the following:

a. Existing Facilities Operated by the Corps.

(1) Provide site plans indicating expansion needed to meet increased demand, or modifications needed to improve site design or user control.

(2) Provide detailed cost estimates including costs of site preparation, landscaping and signs.

b. Dredging.

(1) Identify by pool and river mile all dredging proposed in support of recreational boating.

(2) Provide detailed information on length, width and depth of channel that should be provided and explain if dredge spoil can be used beneficially.

(3) Provide cost estimates for each site.

c. New Sites.

This master plan contains specific recommendations for development of new sites even though at this time no local agencies have indicated an intent to cost share. For these new sites, provide detailed cost estimates including special items of cost associated with development such as bridges, railroad crossings and fencing.

d. Programming.

Establish priorities for recommended improvement of existing facilities. Indicate which improvements will be programmed for development under current policy prior to 30 June 1976. (See OCE letter ENGCW-Y dated 5 August 1965, subject: Implementation of the Federal Water Project Recreation Act (P.L. 89-72) in Previously Authorized Projects.)

4. Items discussed or proposed in this master plan do not in any way conflict with the current concept of a National Recreation Area for the Upper Mississippi River. In fact, this master plan and the related resource maps could very well serve as the framework for a more elaborate development and management plan should the National Recreation Area become a reality.

FOR THE DIVISION ENGINEER:

James W. Gilland

4 Incl (trip)
as fwd sep

JAMES W. GILLAND
Colonel, Corps of Engineers
Deputy Division Engineer for
Civil Functions

CF:
District Engineer, Rock Island

ENGCW-PV (22 May 70) 1st Ind
SUBJECT: Revision of Master Plan for Resource Management, Upper Mississippi River, Pools 11-22, Nine-Foot Channel Navigation Project

DA, Office of the Chief of Engineers, Washington, D. C. 20314 6 Jan 71

TO: Division Engineer, North Central

The revised Master Plans for Pools 13, 14, 15 and 16 are approved subject to the comments expressed by NCDPD-ER in the basic letter and to the following.

a. Chapter IV, Pool 13, Section V, Plate V 1.2. The tabulation of total existing picnic tables listed under the item of camping appears to be in error.

b. Chapter V, Pool 14, Section VI, par. 7a(4), page VI-4 and Section VII, par. 2, page VII-1. The Corps can participate in the construction of new areas in accordance with provisions of PL 89-72 as further implemented by ENGCW-Y 5 Aug 65 letter. Such letter is referenced in paragraph 3d. of the basic letter.

c. Chapter VII, Pool 16.

(1) Section IV, Plate IV-4.3. Shady Creek Public Use Area. The site layout plan should be revised to separate camping, an overnight use, from picnicking, a day-use per the criteria shown in ER 1130-2-312.

(2) Section V, Plate V 1.2. The tabulation of total existing parking units listed under the item of day use and total existing picnic tables listed under the item of camping appears to be in error.

d. In the interest of enhancement of the environmental quality of the recreation areas a program of landscape planting of such areas should be initiated at an early date.

FOR THE CHIEF OF ENGINEERS:

Louis G. Feil

wd all incl

LOUIS G. FEIL
Chief, Planning Division
Directorate of Civil Works

NCRED-PB 18 March 1970

SUBJECT: Revision of Master Plan for Resource Management, Upper Mississippi River, Pools 11-22, Nine-Foot Channel Navigation Project

Division Engineer, North Central

1. Chapter VII, Pool 16, of the subject master plan is submitted in accordance with Engineer Manual 1130-2-302.

2. This chapter of the master plan contains specific information concerning the administration and development of the resources within the pool.

3. It is recommended that chapter VII of the master plan for resource management of the Mississippi River 9-foot channel navigation pools be approved.

2 Incls (6 cys)
1. Narrative, Pool 16
2. Maps, Pool 16

F. W. ASHTON
Acting District Engineer

cc: District File w/o incls
Engrg Div w/o incls
Plan Br (Environ. Res.) w/o incls

REVISION OF MASTER PLAN
FOR
RESOURCE MANAGEMENT

POOLS 11 - 22
NINE-FOOT CHANNEL NAVIGATION PROJECT

CHAPTER VII
THE MISSISSIPPI RIVER, POOL 16

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THE MISSISSIPPI RIVER, POOL 16

SECTION I

INTRODUCTION

As noted in chapter I, a Master Plan is developed to provide a sound instrument of guidance for the administration and operation of land and water resource projects; to assure sound resource management; and to coordinate activities with interested Federal, State, and local agencies. Pool 16, one of the series of navigation pools on the Upper Mississippi River, and within the limits of the Rock Island District, is treated under such master planning requirements. Plate I-1.1 locates the pool with reference to others of the navigational system in the Rock Island District, U. S. Army Corps of Engineers.


LIMIT OF ROCK ISLAND DISTRICT (M. 614.0)
GUTTENBERG
LOCK & DAM NO. 10
MILE 615.1
WISCONSIN
TURKEY RIVER
CASSVILLE
C.B.&Q.
M.600
LOCK & DAM NO. 11
MILE 583.0
WISCONSIN
ILLINOIS
DUBUQUE
M.580
GALENA R.
C.M.St.P.&P.
M.560
LOCK & DAM NO. 12
MILE 556.7
BELLEVUE
M.540
SAVANNA
MAQUOKETA R.
SABULA
PLUM R.
C.R.I.&P.
LOCK & DAM NO. 13
MILE 522.5
IOWA
M.520
CLINTON
WAPSIPINICON R.
C.M.St.P.&P.
M.500
LOCKS & DAM NO. 15
MILE 482.9
LE CLAIRE
LOCKS & DAM NO. 14
MILE 493.3
DAVENPORT
M.480
C.R.I.&P.
MOLINE
ROCK ISLAND
C.M.St.P.&P.
ROCK RIVER
P.I.&S.
LOCK & DAM NO. 16
MILE 457.2
MUSCATINE
M.460
POOL 16
C.R.I.&P.
M.440
LOCK & DAM NO. 17
MILE 437.1
NEW BOSTON
IOWA RIVER
M.&St.L.
KEITHSBURG
M.420
ILLINOIS
LOCK & DAM NO. 18
MILE 410.5
KEOKUK
SKUNK
BURLINGTON
C.B.&Q.
M.400
FT. MADISON
IOWA
MISSOURI
DES MOINES R.
A.T.&S.F.
M.380
LOCKS & DAM NO. 19
MILE 384.2
KEOKUK
HAMILTON
M.360
C.B.&Q.
MISSOURI
LOCK & DAM NO.20
MILE 343.2
CANTON
M.340
QUINCY
LOCK & DAM NO.21
MILE 324.9
M.320
C.B.&Q.
C.R.I.&P.
HANNIBAL
LOCK & DAM NO.22
MILE 301.2
SAVERTON
M.300
LIMIT OF ROCK ISLAND DISTRICT (M.300.0)
SALT RIVER
THE SNAKE
LOUISIANA
G.M.&O.
M.280
CLARKSVILLE
LIMIT OF ROCK ISLAND DISTRICT (M.261.0)
LOCK & DAM NO. 24
MILE 273.4
MISSISSIPPI RIVER
9-FT. CHANNEL PROJECT
ROCK ISLAND DISTRICT
IN 1 SHEET
SHEET NO. 1
10 5 0 10 20
SCALE IN MILES
CORPS OF ENGINEERS, U.S. ARMY
ROCK ISLAND, ILLINOIS
ROCK ISLAND DISTRICT
JANUARY 1959

PLATE I-1.1

SECTION II

DESCRIPTION OF PROJECT

1. General. In a downstream sequence of navigation pools, pool 16 is the sixth of the 12 such units within the Mississippi River limits of the Rock Island District. Extending between river miles 457.2 and 482.9, the pool is 25.7 river miles in length lying between Muscatine, Iowa, and Davenport, Iowa - Rock Island, Illinois. Rock Island County bounds the entire length of the pool in Illinois and parts of Scott and Muscatine Counties lie along the Iowa shore. Pool 16 is the only complete pool within the Rock Island District to be oriented in a generally east-west direction.

2. Topography and geology. The extreme upper limits of the pool continue in the narrow confines of the former rapids area which characterized pool 15. However, from the ancient Rock River delta, and on downstream, the Mississippi River again follows the valley originally excavated by a much larger glacial stream. The river widens, partly as a result of the addition of Rock River flows, and the flood plain broadens considerably. Low-lying and rolling hills border the flood plain on each side and in places approach the shoreline. In such instances, however, the opposite flood plain widens. Loess and decayed vegetable matter leached from the highlands by the elements through the ages, and deposited on islands and the flood plain bottomlands, have created rich and fertile soil conditions.

Six minor creeks and one major tributary - Rock River - join the waters of the Mississippi within the pool limits. The creeks, while having rapid response to heavy rainfall runoff, have little short-range effect on pool levels. High flows on the Rock River, however, can have an appreciable and extended effect on pool elevations. Recurrent high water stages on any of the entering streams can pose localized siltation problems from a resource management standpoint.

The upper shore area of the pool is a continuation of the urban-industrial complex bordering most of upstream pool 15. Downstream lands support farms, woodlands, small urban developments, and several industrial installations are located along the Iowa shore. Numerous and sizeable islands are general throughout the entire stretch and support dense timber stands and undergrowth.

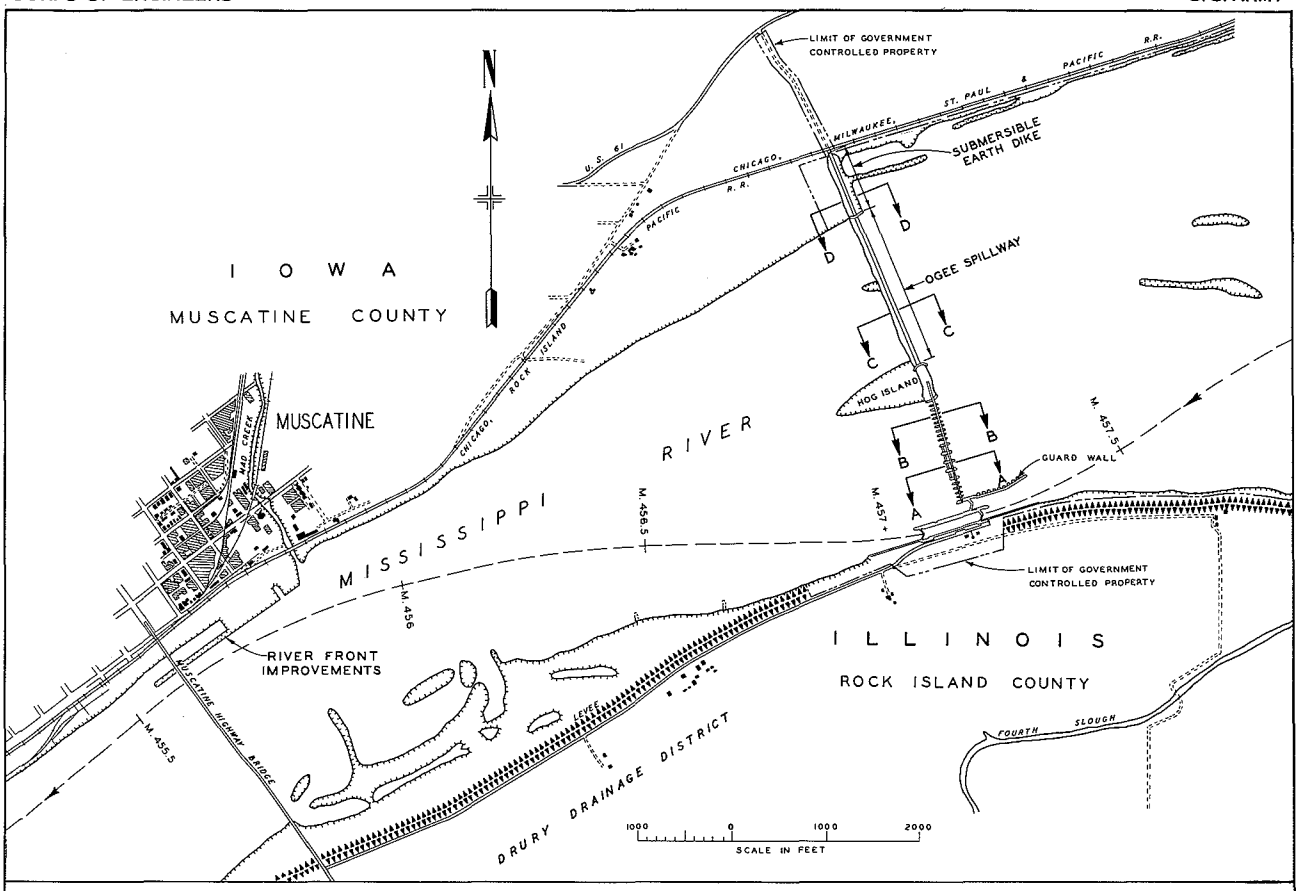
The original glacial stream, which excavated and formed the Mississippi Valley, was followed by subsequent glacial periods which partially refilled the valley and raised the river bed. The last such ice sheet is estimated to have receded some 12,000 to 13,000 years ago leaving the river in much its present course within the Rock Island District. The rapids bedrock channel (a characterization of pool 15) still exists to the vicinity of the mouth of Rock River, but original bedrock is as much as 150 feet below the present stream bottom in the remaining reach of the pool. Bedrock strata is Devonian limestone overlaying Niagaran dolomite.

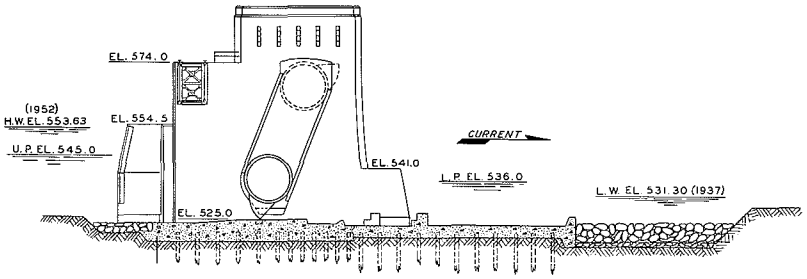
3. Lock and dam No. 16. The existing structure, located at river mile 457.2, is one of 12 Rock Island District installations constructed as part of the canalization system of the Upper Mississippi River. The single 110-foot by 600-foot lock and the completed upper section of a future auxiliary lock lie along the Illinois shore immediately upstream of and opposite Muscatine, Iowa.

The movable section of the dam consists of 4 roller gates and 15 tainter gates which are adjusted as necessary to maintain the impounded pool at the authorized elevation. The remainder of the dam, extending to high ground in Iowa, is composed of a section of fixed concrete spillway and a section of non-submersible earth dike. A plan and location of the structure appears on plate II-2.1 and on chart No. 83 of the Upper Mississippi River navigation charts.

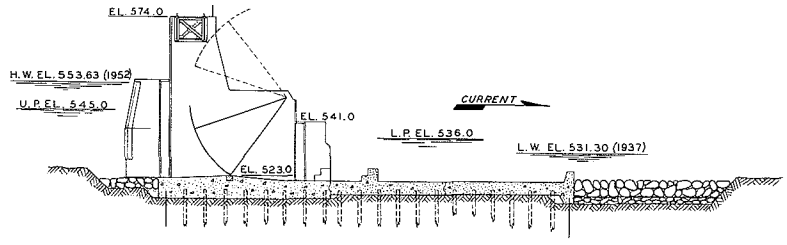
4. Pool 16. Extending in a generally easterly direction above the dam, the pool is 25.7 river miles in length, has a drainage area of 99,400 square miles at the dam, and varies between 1,800 and 8,000 feet in width under normal flow conditions. The authorized pool level (flat pool) is established at 545.0 feet above mean sea level (1912 adj.). Low water of record, since the dam was placed in service, was recorded at elevation 541.4, or 3.6 feet below the authorized flat pool level. High water of record (April-May 1965) reached elevation 557.5 or 12.5 feet above the normal pool elevation at the dam.

Maintenance dredging has not been required to the extent necessary in other pools within the District and has amounted to only 853,800 cubic yards of material since the pool was established. Dredging locations have not been suitable for material disposal to existing or future recreational sites.

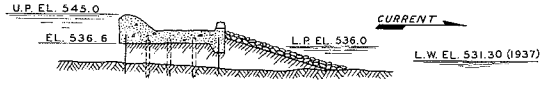




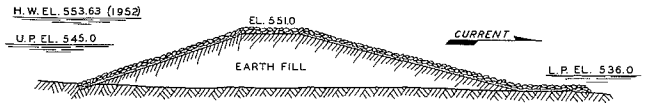
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

10 0 20 40 60
SCALE IN FEET

NOTE:
AVAILABLE DIMENSIONS OF LOCKS:
MAIN LOCK 600' X 110'
AUXILIARY LOCK 360' X 110' (FUTURE)
CONTROLLING DEPTH 12' AT NORMAL POOL
NORMAL LIFT 9 FEET.

REFERENCES:
1. ELEVATIONS BASED ON MEAN SEA LEVEL DATUM (1912 ADJUSTMENT).
2. RIVER MILEAGE ORIGINATES AT MOUTH OF OHIO RIVER.

MISSISSIPPI RIVER
RIVER AND HARBOR PROJECT
LOCK & DAM NO. 16
NEAR MUSCATINE, IOWA

SCALE AS SHOWN
ROCK ISLAND DISTRICT
30 JUNE 1961

SECTION III

POOL RESOURCES

1. General. The existing physical features of the pool are examined and analysed on both a qualitative and quantitative basis. Present and future management programs, usage, operational procedures, and recommended developments are based on such pertinent factors. As noted in chapter I, paragraph 7b, page II-5, acreage figures contained herein have, for the most part, been calculated from Master Plan maps for recreation and general land use planning and are not to be considered accurate for legal purposes. Significant variance may exist between the acreages given and the official records maintained by the Real Estate Division of the Rock Island District Office.

2. Water. Pool 16, as with other navigation pools in the Upper Mississippi River system, contains the characteristics of both a river and a shallow lake in its 12,047 surface acres at the authorized flat pool elevation. Water conditions are generally good except in the most upstream reaches of the pool. This portion of the pool, being bordered by both municipal and industrial development, has a somewhat lower quality.

The relatively broad flood plain and the lands bordering Rock River, a major tributary, present a source of potential agricultural pollutants to pool waters.

Approximately 10 percent, or 1,261 surface acres, are channel waters of a minimum 9-foot depth while the remaining 10,786 surface acres, or 90 percent, of off-channel waters vary in depth and may present areas of navigational hazards to recreational boating.

3. Land. The original land acquired in fee by the Federal Government for the 9-foot channel project, within the pool limits, amounted to 7,005 acres of both shore and island property. Of such acquisition, 4,746 acres remain above the authorized pool elevation established by dam No. 16. The Corps of Engineers administers 4,722 acres and the U. S. Army Weapons Command the remaining 24. All islands within the pool limits, except two with a total area of 67 acres, were acquired as part of the project. (Credit Island is considered a part of the mainland because of the connecting landfill causeway). Some 2,692 acres are embodied in 122 islands under Federal ownership. Of the lands administered by the

as of 9-7-71

Corps of Engineers, ~~2,673~~ 2610 acres have been outgranted to the Department of the Interior, Bureau of Sport Fisheries and Wildlife, for management purposes only under the provisions of the General Plan and Cooperative Agreement.

Identifiable accretions to Federal property totaled 37 acres through 1964. The flat-pool shoreline (mainland and islands) totals 231 miles with the Corps of Engineers controlling 49½ miles of mainland and 148 miles of island shoreline, the U.S. Army Weapons Command 2 miles of island shoreline, and the Bureau of Sport Fisheries and Wildlife ½ mile of mainland shoreline. Non-Federal entities control 29 miles of mainland and 2 miles of island shoreline.

Leases on project lands for agricultural purposes are permitted by law and are generally granted for 5-year periods, subject to availability. Four commitment leases and eight negotiated leases involving 256.9 acres are presently in force. No new lease areas are anticipated.

4. Vegetation. Federal lands, in general, support a vegetative cover tending towards a dense growth. Public boat excursions to the Andalusia Island area were once billed as jungle cruises in local advertising and were a popular form of entertainment. Medium to dense vegetation covers 90%, or 4,280 acres of Federal lands while 4%, or 203 acres is classified as sparse, and 6%, or 289 acres as open. The lower areas support prolific growths of willow, cottonwood, red birch, ash, locust, and maple; while oak, hackberry, walnut, cedar, American elm, hickory, and linden are more common on higher areas.

The timber management program, instituted in 1941, allows for select harvesting of mature specimens chosen and marked by District specialists. Between October 1950 and March 1967 a total of 368,610 board feet of timber was sold to private interests representing an income of $5,731.88 to the Federal Government. The purpose of a controlled timber harvesting program is to increase annual yield and thereby partially supply the growing demand for wood material, and at the same time to improve quality and species composition.

5. Wildlife. Pool land and water areas attract and support a variety of wildlife, both resident and migratory. A wildlife sanctuary has been established by the Bureau of Sport Fisheries and Wildlife on lands and waters outgranted by the Corps of Engineers in the vicinity of river mile 467.0. The Island sanctuary involved 363 acres of which 245 acres are land and 118 acres are water areas.

a. Birds. The pool, as part of the "Mississippi Flyway", is host to some 19 species of ducks and 4 species of geese during the spring and fall migratory periods. Ideal timber nesting conditions attract numerous wood ducks as summer residents and mallard, blue-wing teal, and hooded merganser will also occasionally nest. The coot, grebe, snowy egret, heron, bittern, and gull, along with numerous shorebirds and song birds, are either resident or migratory visitors.

b. Animals. The white-tailed deer, classified as a big game animal, finds good habitat within the pool area and, while not numerous, has wide distribution. Small animal populations are relatively numerous in a favorable habitat and include raccoon, skunk, weasel, opossum, mink, muskrat, beaver, fox, squirrel, rabbit, and woodchuck. Otter and badger are seen occasionally, and more rarely a coyote may be reported.

Muskrat is common to abundant, although numbers will vary depending on yearly water elevations and other seasonal conditions. Beavers are not numerous and are considered to have reached a stable concentration. Raccoon and squirrel are relatively abundant, but will vary widely in numbers as a result of changing habitat conditions caused by fire, flood, and timber harvest. Populations of other small animals are considered as generally stable.

Several species of watersnakes are probably the most numerous of a variety of non-poisonous snakes to be found throughout the pool reaches. The only poisonous specimens native to the area are two species of rattlesnake and the copperhead. However, while fairly common in the days of the early settlers, instances of sightings are now rarely reported.

6. Fish. The sport fishery species composition is generally the same as in other pools within the District and includes walleye, sauger, northern pike, perch, bluegill, freshwater drum, crappie, bass, channel catfish, and bullhead. No creel census of the sport fishery is available and the rewards per man-hour of effort is not known. The sport catch for 1968 is placed at 18,000 pounds and the commercial catch at 91,596 pounds for the year. The commercial effort concentrates on carp, buffalo, freshwater drum, and catfish with much of the catch shipped to Chicago and eastern markets. Commercial activities can be considered as relatively minor when compared to pools 11 and 12 in the northern areas of the District.

7. Recreation. Considerable Federal land is available for recreational developments within the pool limits in addition to the three presently existing. Potential is present on both shores although Federal lands are somewhat more extensive along the Illinois stretch and no industrial developments exist below the confluence of Rock River. One Corps of Engineers public use area has been developed along the Illinois shore and two others on the Iowa side of the river. All are experiencing constantly increasing usage, although space does exist for expansion of present facilities. Excellent opportunities for hunting, fishing, and pleasure boating exist throughout most of the pool area.

8. Historical and archaeological. The westernmost battle of the Revolutionary War was fought near the confluence of the Rock and Mississippi Rivers in 1780. A force of 350 Americans, French, and Spaniards was sent to punish the Indians for their support and help to the British enemy.

By the Treaty of 1816, Illinois Indian tribes gave up claims to all land south of a line drawn from the lower end of Lake Michigan to the Mississippi River - terminating at the river a short distance downstream of Fort Armstrong. The line, surveyed in 1817 and again in 1819, was also to have been the northern limits of the State of Illinois. Had this plan been followed, the present city of Rock Island would lie in both Wisconsin and Illinois.

U. S. Highway 6, crossing Illinois and part of Indiana, now follows the Great Sauk Trail which ran between Rock Island and Detroit, and was shown on maps as early as 1681. Originally a buffalo trail, the deeply-embedded path became the road the Indians traveled on their yearly visits to Canada to receive presents from the British.

Credit Island, near the Iowa shore and opposite the mouth of Rock River, was the first land to be inhabited by white men in the immediate area. The name derives from the credit advanced by Americans, British, and French traders to the Indians in the fall of the year against payment in furs the following spring. A thriving business along such lines had been established as early as 1791.

Credit Island also saw the military defeat of a future president of the United States - Major Zachary Taylor - during the War of 1812. Major Taylor, with 334 men, was sent from St. Louis to avenge the defeat of Lt. John Campbell of Campbell's Island fame (pool 15). Arriving off Credit Island in September 1814, Major Taylor's fleet of

keelboats was forced to land on nearby Pelican Island because of a violent storm. Here, the following morning, the detachment was attacked by Indians and finally forced to retreat from the effective fire of British cannons positioned on Credit Island. The Americans returned downstream to the present location of Keokuk, Iowa, and there built a fort to command the lower river.

Interest in connecting the Mississippi and Illinois Rivers by means of a canal began in 1832. Several surveys were made, mostly favoring the Marias d'Osier (original Mississippi River channel) route for the western stretch of the waterway. Considerable pressure was brought to bear on Congress by individuals, organizations, and State legislatures throughout the years for construction authorization and funds. However, the project, after construction began, was plagued by interminable delays brought about by various litigations concerning bridges, farmlands, etc., and when finally operable, enthusiasm for the route had cooled.

The 75-mile Illinois and Mississippi Canal, (also called the Hennepin Canal, or more simply the I&M Canal) begun in 1892 and completed in 1907, was constructed along the south side of Rock River for 8.7 miles of its western terminus and joined the Mississippi below the existing rapids rather than above as had first been planned. For the first time in America concrete construction was used on the 33 lock structures rather than the more expensive cut stone. The improvement of portland cement in the United States had freed the nation from dependency on Sweden, Germany, and England for such construction material.

The great expectations for the canal were never realized. By the time construction was completed the colorful river packets were beginning to disappear from the Upper Mississippi Valley and the decline in water transportation also affected the canal. The phenomenal rebirth of river traffic, following the 9-foot channel project of the 1930's on the Mississippi, found the canal obsolete because of slow passage through the 33 locks, the shallow 7-foot depth, and narrow 80-foot channel. By 1948 the Corps of Engineers was operating the canal only 2 days a week for pleasure craft and requiring 7 days notice from shipping interests to arrange for commercial passage. Operation of the locks on the Illinois and Mississippi Canal was discontinued on 1 July 1951. On 19 November 1969 the entire waterway and feeder canal were deeded to the State of Illinois for conversion to a State park. The State of Illinois will construct a number of camping, picnicking, and boat launching

sites along both banks of the canal. The Corps of Engineers completed repairs on bridges and lock gate structures prior to transfer of ownership.

Numerous inland sloughs and small lakes, around the mouth of Rock River, are the remains of a much wider stream of prehistoric times when the lower Rock River Valley was part of the main channel of the Mississippi River.

The Rock-Mississippi Rivers area is especially rich in Indian lore and history. The prehistoric mound builders lived here possibly as much as 8,000 years ago. Amateur archaeologists of the 1870's unearthed many copper tools and ornaments in their investigations. It has since been established that these early people traveled and traded widely, obtaining copper from the present upper Michigan area and sea shells from the Gulf of Mexico. The Illinois Indians (Sauk and Fox) of historic times are believed to have occupied the area about 1720, remaining until displaced by the whites after the Black Hawk War and the Treaty of 1832. Other remains of the mound builder culture likely exist along the higher shores of the downstream pool since evidences of these people have been found from St. Paul, Minnesota, to Baton Rouge, Louisiana, and in the Ohio River Valley.

A vast limestone quarry, upstream of Buffalo, Iowa, shows the deposits of the Ordovician Period of the Paleozoic Age of some 500 million years ago when shallow seas covered most of the present midwestern United States.

In the 1830's a new Illinois town called Rockport was founded (entirely on paper), a few miles downstream of the present city of Rock Island. Many easterners, including the now historically famous John C. Calhoun and Daniel Webster, bought lots which remained unimproved after the speculative fever had run its course. The site was bought for taxes by Napoleon Bonaparte Buford, who was later to become a Civil War general, and in 1845 renamed "Andalusia" by his wife.

A U. S. Bureau of Fisheries Biological Station was completed at Fairport, Iowa, in 1913 as an experimental site for the development of fresh water clams. For many years, prior to and following the turn of the century, the clam fishery was an important industry on the upper river. Countless tons of clams were dredged to supply shells for the thriving "pearl" button factories located in several towns along the river.

SECTION IV

FACTORS AFFECTING RESOURCE USE

1. General. Pool 16, extending from Muscatine, Iowa, to Davenport, Iowa - Rock Island, Illinois, is another link in the chain of pools, or lakes, which have been developed for navigation on the upper Mississippi River. Major ports are located at Rock Island, Illinois, and Linwood, Iowa, serving river commerce in the transportation of raw materials, agricultural machinery, industrial products, and construction materials. Plate IV-2.1 graphically records the commercial activities of lock No. 16 over a period of nearly two decades. Considerable potential exists on Federal lands for recreational developments in addition to the three sites presently in use.

2. Zone of influence. The primary zone of influence is considered as two counties in width, extending approximately 50 miles inland, and following each side of the river the length of the District. The total population of all counties within this zone is contained in chapter I, section VII. Enumeration of population by pools is considered as impractical since each pool spans only segments of two or more counties.

The only major population concentration occurs in the extreme upper limits of the pool in Rock Island, Illinois, and Davenport, Iowa, each lying partially in both pools 15 and 16. The 1960 census counted 51,863 persons in Rock Island and 95,796 in Davenport. Smaller communities within the pool limits for which 1960 figures are given are Andalusia, Illinois - 769, and Buffalo, Iowa - 1,088. Recreationists in the Davenport-Rock Island area, which includes other Iowa and Illinois cities, have the facilities of two pools at their disposal.

3. Economic conditions. Both industry and agriculture are represented in the economy of pool lands not under Federal ownership. Industry is concentrated in the upper pool area with agricultural pursuits followed throughout the remainder of the stretch on a relatively broad flood plain - especially along the Illinois shore. The Davenport-Rock Island area is a center of parks, colleges, museums, convention facilities, and sites of historic significance. Federal ownership of shore lands is mostly general beyond urban areas but more extensive along the Illinois side of the pool.

Land use classifications provide reservations for industrial use on Federal property at river mile 469.2-470.4 - Iowa (35 acres) and at river mile 473.3-473.9 - Illinois (55 acres). One industrial lease has been granted for use of 2.8 acres of this total. Additional demand for for industrial leases may develop if methods are found to insure a 12-month navigation season. Ways and means of providing full-year navigation activities are presently under study.

4. Accessibility. Railroad passenger service is available only to Rock Island, Illinois, on east-west cross-country lines, although other routes follow the Iowa shore the length of the pool. A controlled-traffic airport is located at Moline, Illinois, and serves the Iowa-Illinois area with scheduled flights. A municipal uncontrolled-traffic airport is also located at Davenport, Iowa, but has no scheduled airline service. No other airports or landing fields exist in the near vicinity of pool shores. Scheduled bus service operates between the smaller towns located on the river within the pool limits.

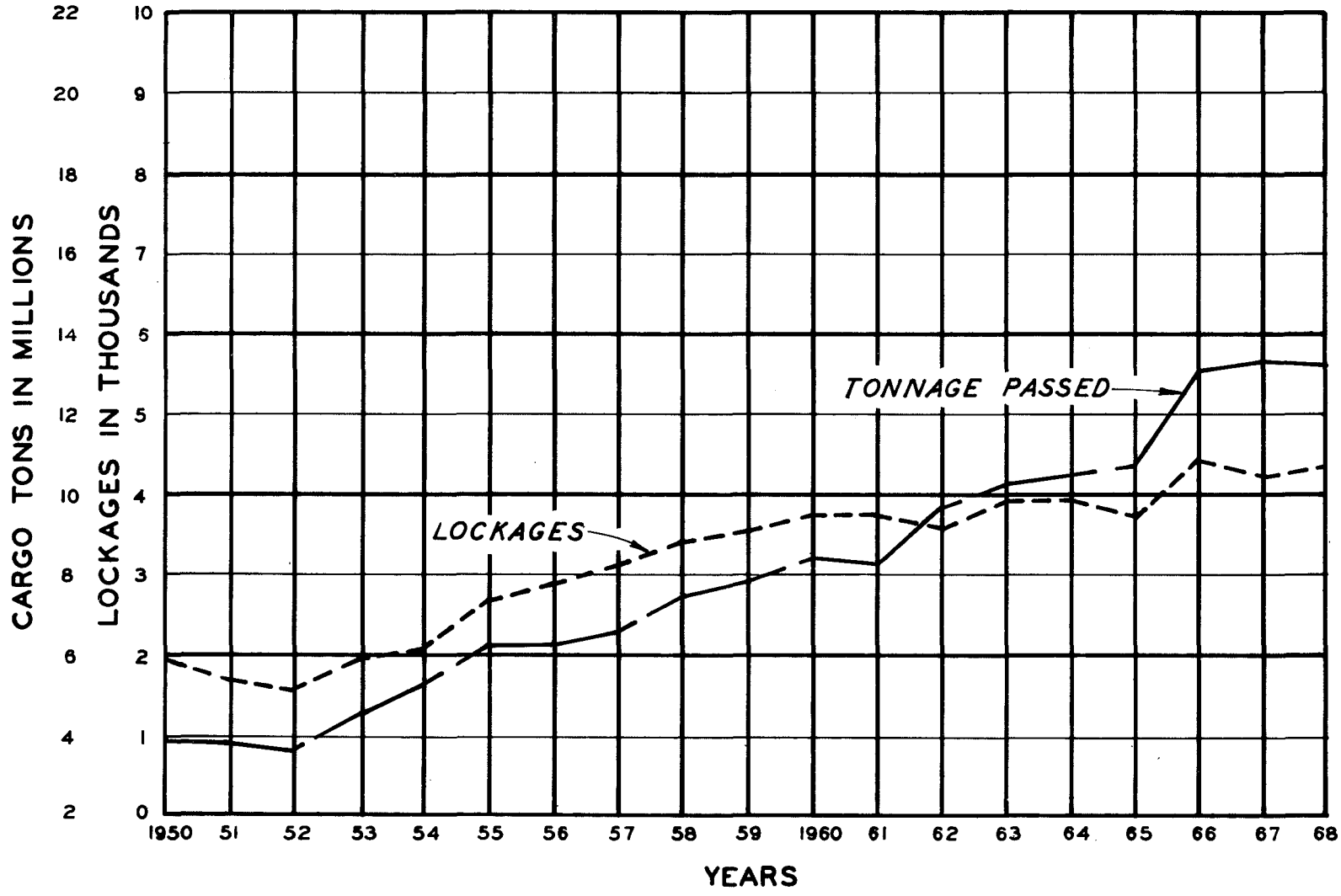
Road access to pool waters exists at ten points in Iowa and eight in Illinois with nine of the total leading through Federal property. The Great River Road, segments of which presently exist, is being planned to closely follow both shores of the river from the Canadian border to the Gulf of Mexico and will offer outstanding scenic attractions. The road is a reality along the Iowa shore between the cities of Muscatine and Davenport, Iowa, and a shorter stretch along the Illinois shore affords a view of the river.

A scheduled sightseeing boat operates during the summer season from Davenport, Iowa, for pleasure cruises on the waters of both pools 15 and 16.

Two bridges span the river across pool 16 - a high-level highway structure and a swing-span railroad bridge, both located in the upper pool area. A new interstate highway crossing is in the planning stage and will be located approximately 3,000 feet below the entry of Rock River.

5. Existing recreational facilities.

a. The Corps of Engineers has established and presently maintains 25 recreational areas along the river shores within the District limits as located on plate IV-2.2. Of this number, 3 are located in pool 16.



LOCK NO. 16

CORPS OF ENGINEERS U.S. ARMY

PLATE IV-2.1

STATE	RIVER MILE	POOL	NAME OF AREA	PICNIC AREA	DRINKING WATER	LAUNCHING RAMP	COMFORT STATION
WISCONSIN	601.7	11	BERTOM LAKE PUBLIC USE AREA				●
	591.0	11	GRANT RIVER PUBLIC USE AREA	●	●		●
	590.5	11	SOUTH POTOSI LAUNCHING AREA			●	
IOWA	553.0	13	PLEASANT CREEK PUBLIC USE AREA	●	●	●	●
	525.5	13	BULGER'S HOLLOW PUBLIC USE AREA	●	●	●	●
	468.3	**16**	**MONTPELIER PUBLIC USE AREA**	●	●	●	●
	464.8	**16**	**SHADY CREEK PUBLIC USE AREA**	●	●	●	●
	446.8	17	KILPECK LANDING PUBLIC USE AREA		●	●	
	433.6	18	FERRY LANDING PUBLIC USE AREA	●	●	●	●
ILLINOIS	558.5	12	BLANDING LANDING PUBLIC USE AREA	●	●	●	●
	539.8	13	ACCESS CHANNEL				
	531.0	13	BIG SLOUGH PUBLIC USE AREA	●	●	●	●
	526.0	13	THOMSON CAUSEWAY PUBLIC USE AREA	●	●		●
	522.5	13	LOCK AND DAM NO. 13 PUBLIC USE AREA	●		●	
	517.5	14	CATTAIL SLOUGH PUBLIC USE AREA	●	●	●	●
	493.3	15	FISHERMAN'S CORNER PUBLIC USE AREA	●	●		●
	471.0	**16**	**ANDALUSIA SLOUGH PUBLIC USE AREA**	●	●	●	●
	449.5	17	BLANCHARD ISLAND CHUTE PUBLIC USE AREA	●	●	●	●
	340.8	21	BEAR CREEK PUBLIC USE AREA	●	●	●	●
	331.6	21	CANTON CHUTE PUBLIC USE AREA	●	●	●	●
	324.6	22	LOCK AND DAM NO. 21 PUBLIC USE AREA	●	●	●	●
	313.8	22	OLD SNY CHANNEL LAUNCHING AREA			●	
	303.3	22	PARK-N-FISH PUBLIC USE AREA				
MISSOURI	347.7	20	FENWAY LANDING PUBLIC USE AREA	●	●	●	●
	343.3	20	LOCK AND DAM NO. 20 PUBLIC USE AREA	●			
	301.0	24	LOCK AND DAM NO. 22 LAUNCHING AREA			●	

MISSISSIPPI RIVER

ROCK ISLAND DISTRICT RECREATION AREAS

10 5 0 10 20
SCALE IN MILES

CORPS OF ENGINEERS, U.S. ARMY
ROCK ISLAND, ILLINOIS

ROCK ISLAND DISTRICT
FEBRUARY 1968

(1) Andalusia Slough Public Use Area. A 2-acre development, plate IV-4.1, lies along State Highway 92 approximately 3 miles downstream of Andalusia, Illinois, at river mile 470.5. Facilities available to the public include a graveled boat launching ramp and maneuvering area, a water supply, 2 pit-type toilets, a graveled parking area for 19 cars, 11 picnic tables, 8 pedestal fireplaces, 12 trash containers, and 9 graveled camping spurs. Approximately 1,100 feet of graveled circulation road serves the development. Further expansion is possible and parts of the area would benefit from future dredge disposal. Dredging in the launching area is presently needed.

(2) Montpelier Public Use Area. A 6-acre area, plate IV-4.2, located riverward of the village of Montpelier, Iowa, at river mile 468.3. Present facilities include a concrete boat launching ramp and graveled maneuvering area, graveled parking for 12 car-boat trailer units, a water supply, 2 pit-type toilets, 14 picnic tables, 5 pedestal fireplaces, and 12 trash containers. The acreage indicated includes 4 acres formerly held by the village of Montpelier under license from the Corps of Engineers and recently relinquished. Expansion and improvement of the original site will incorporate the additional area as funds permit. The development is presently served by approximately 1,400 feet of graveled circulation roadway.

(3) Shady Creek Public Use Area. Located approximately one mile upstream of Fairport, Iowa, river mile 464.8, the site plan is shown on plate IV-4.3. Public facilities of the 5-acre tract include a concrete boat launching ramp and boat dock, parking for 25 car-boat trailer units, a well, 17 picnic tables, 13 pedestal fireplaces, 18 trash containers, 11 graveled camping spurs, graveled parking for 10 passenger cars, and 2 pit-type toilets. Graveled circulation roadway totals approximately 1,700 feet.

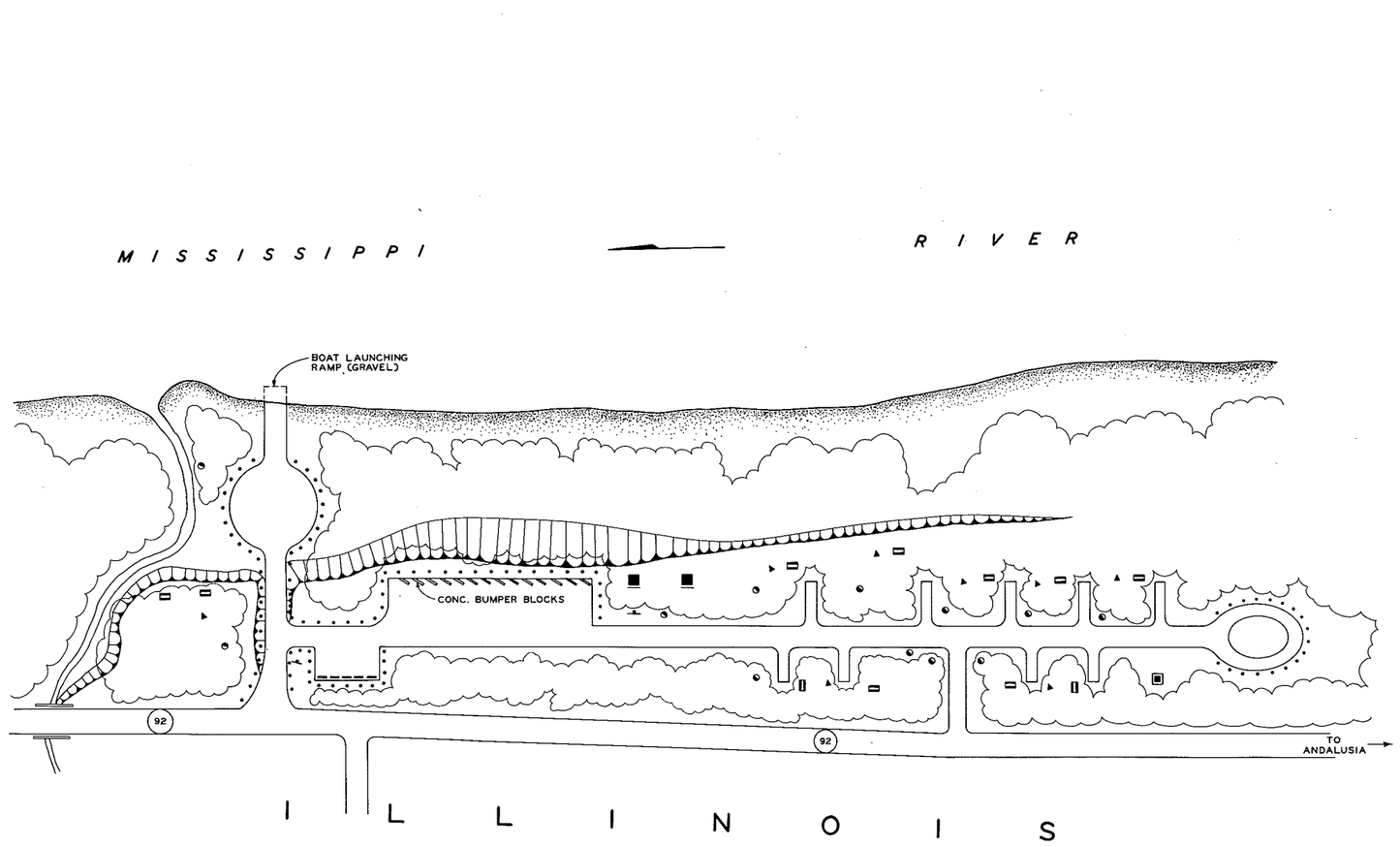
The development experiences considerable usage and was expanded in 1968. Space exists for further expansion as demand increases.

b. The Corps of Engineers has granted leases or licenses for use of Federal lands within the pool at: river mile 472.0, Illinois - a boat harbor, village of Andalusia; river miles 466.5 to 470.1, Illinois - Rock Island County Forest Preserve which has established a boat launching ramp at river mile 467.1 (Loud Thunder Forest Preserve) and public use areas at river miles 468.4, 469.1, and 470.1; river mile 462.3, Iowa - boat launching ramp, Izaak Walton League; and river mile 462.0, Iowa - a public use area developed by the Iowa State Conservation Commission.

c. Recreational facilities have also been located on other than Federally owned lands within the pool limits. A boat club has been established at river mile 481.0, Iowa; a city park at river mile 480.5, Iowa; a boat club at river mile 480.2, Illinois; a municipal public use area at river mile 480.1, Illinois; a city park and boat harbor at river mile 479.7, Illinois; a boat club at river mile 479.6, Iowa; a municipal launching ramp at river mile 479.3, Iowa; a boat harbor at river mile 479.2, Iowa; a boat club at river mile 478.0, Iowa; a boat harbor at river mile 477.6, Iowa; a municipal launching ramp at river mile 473.0, Iowa; a marina at river mile 471.5, Illinois, and a County Forest Preserve public use area at river mile 467.3, Illinois.

6. Water quality. The entire pool is presently regarded as having water of such quality to allow most forms of water-oriented recreation. Studies have indicated significant biological and bacterial contamination in the upper reach of the pool. This condition makes water-contact recreation questionable at this time, but aquatic biota of this reach does not indicate a critical level of pollution. Uncontrolled industrial or municipal development throughout the upper reaches of the pool could preclude recreational use. Agricultural pollutants from a major tributary, the Rock River, may present a potential threat to the water quality of the pool.

7. Climatic conditions. The area experiences a wide range of temperatures throughout the year with recorded extremes of 106°F. and -26°F. Substantial changes occur within a relatively short period as a direct result of proximity to some of the more important storm tracks. Summer humidity can be high over extended periods. The mean annual temperature is 50.1° with a summer average of 73.3° and a winter average of 25.3°. Average annual precipitation is 34.3 inches and the crop growing season spans 180 days from mid-April to mid-October. Prevailing summer winds vary between south, southwest, and west and shift to northwest and north during winter months. A normal river navigation season will begin in late February or early March and be halted by ice in mid-December. Increasingly powerful towboats have extended the average navigation season in the last several years. In 1966 Congress directed the Corps of Engineers to review the existing project and determine the feasibility and economic justification of providing a 12-month navigation season. The study is currently in progress.



LEGEND:

- PICNIC TABLE
- TRASH CONTAINER
- FIREPLACE
- SIGN
- WATER SUPPLY
- GUARDRAIL
- SANITATION – PIT TYPE

UPPER MISSISSIPPI RIVER

REVISED MASTER PLAN

ANDALUSIA SLOUGH PUBLIC USE AREA

POOL 16, RIVER MILE 470.5

SITE PLAN

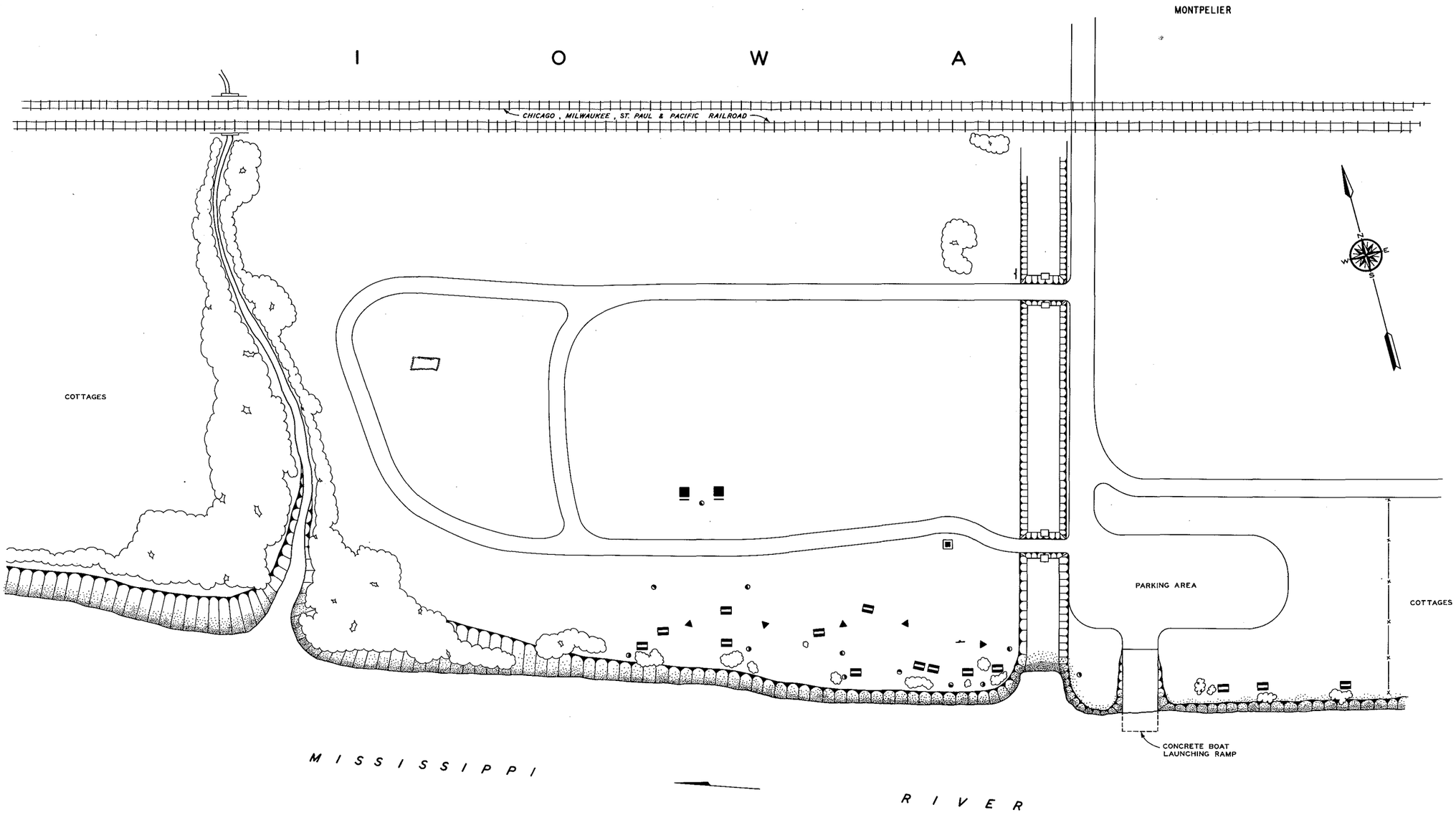
40 0 40 80 120

SCALE IN FEET

CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

ROCK ISLAND DISTRICT
OCTOBER 1969

PLATE IV-4.1



LEGEND

- PICNIC TABLE
- TRASH CONTAINER
- FIREPLACE
- WATER SUPPLY
- SANITATION – PIT TYPE
- VEGETATION
- SIGN

CLARK's LANDING

UPPER MISSISSIPPI RIVER

REVISED MASTER PLAN

~~MONTPELIER PUBLIC USE AREA~~

POOL 16, RIVER MILE 468.3

SITE PLAN

30 0 30 60 90
SCALE IN FEET

CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

ROCK ISLAND DISTRICT
OCTOBER 1969

PLATE IV-4.2

UPPER MISSISSIPPI RIVER

REVISED MASTER PLAN

SHADY CREEK PUBLIC USE AREA

POOL 16, RIVER MILE 464.8

SITE PLAN

30 0 30 60 90
SCALE IN FEET

CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

ROCK ISLAND DISTRICT
OCTOBER 1969

PLATE IV - 4.3

SECTION V

CURRENT AND ANTICIPATED RECREATIONAL USE

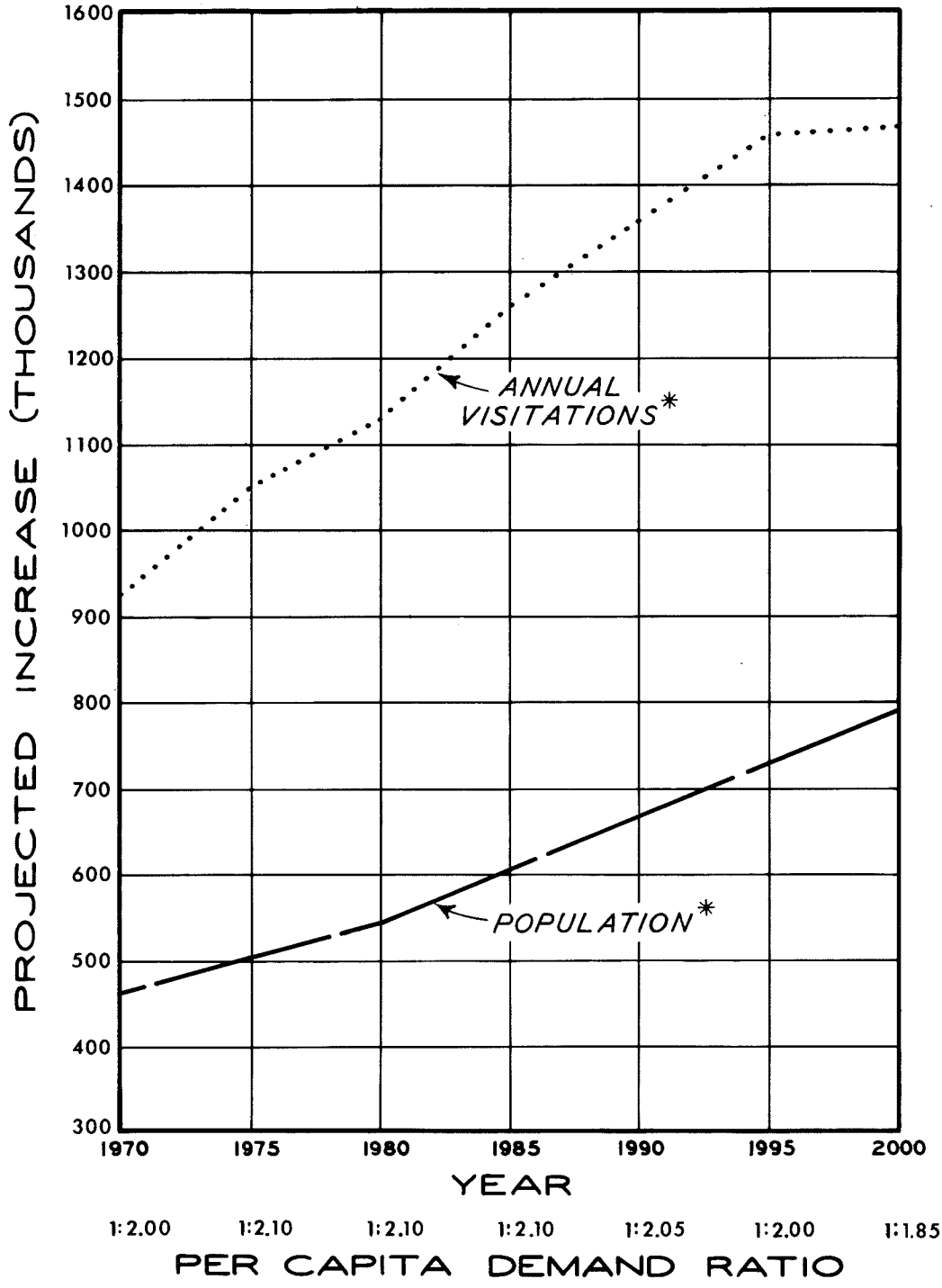
The pool 16 area stands in first place, in terms of recreational attendance, among the 12 Mississippi River nagivation pools contained within the limits of the Rock Island District of the Corps of Engineers. Visitations were in excess of 925,800 persons during calendar year 1968 and ranged from a low of 30,490 in February to a high of 133,172 in July. No peak day total was tabulated in the statistics collected.

The high visitation incidence results from the pool location which is partially within the major area of urban population concentration of the Rock Island District. Outstanding scenic and water-oriented recreational opportunities are present, however, and the pool is far superior in this respect to upstream pool 15.

Plate V-1.1 presents the anticipated population increase and corresponding recreational demand within the primary zone of influence - an area two counties in width (approximately 50 miles) extending inland on each side of the pool. The per capita use ratio is calculated on the projected 1970 population and visitations reported in the past and is expected to increase at a relatively constant rate for the immediate future. A sharp rise following 1980, however, is expected under an assumption of additional and improved access to pool waters. A saturation of annual visitations is anticipated by 1995.

Plate V-1.2 tabulates pool recreational facilities presently developed or proposed by both Federal and non-Federal agencies or individuals. Non-Federal installations are limited to those immediately adjacent to the river and may or may not be located on lands leased from the Federal Government. Proposed non-Federal developments are those known to be scheduled for completion in the near future.

Total requirements for future anticipated demand are based on expected population and public recreation participation. Projected facility developments, to serve an increasing population and demand, are calculated from criteria established in ER 1130-2-312. On this basis adequate facilities are neither existing nor presently proposed.



*PRIMARY ZONE – AREA TWO COUNTIES IN WIDTH (APPROX. 50 MILES) EXTENDING INLAND ON EACH SIDE OF POOL.

NOTE: ANNUAL VISITATIONS ARE EXPECTED TO REACH A SATURATION POINT BY 1995.

POOL 16
MISSISSIPPI RIVER
PROJECTED POPULATION & VISITATIONS

POOL 16

1969 EXISTING AND PROPOSED FACILITY DATA

	EXISTING FEDERAL FACILITIES	EXISTING NON-FEDERAL FACILITIES	TOTAL EXISTING FACILITIES	RECOMMENDED FEDERAL FACILITIES	* PROPOSED NON-FEDERAL FACILITIES	TOTAL PROJECTED FACILITIES	** TOTAL REQUIREMENTS FOR ANTICIPATED DEMAND			
							1970	1980	1990	2000
DAY-USE			113							
PARKING (UNITS)	23	90	~~110~~		10	10	231	284	341	365
PICNIC TABLES	24	45	69		10	10	231	284	341	365
FIREPLACES	10	0	10		6	6	115	142	170	182
POTABLE WATER	3	3	6		0	0	7	9	11	12
SHELTERS	0	1	1		0	0	68	84	101	108
BOAT LAUNCHING										
PARKING (UNITS)	44	170	214		10	10	230	280	340	360
RAMPS	3	9	12		1	1	23	28	34	36
CONCESSIONS, FUEL, ETC.	0	6	6		0	0	-	-	-	-
SANITATION										
PIT TOILETS	8	10	18		2	2	10	12	14	16
FLUSH TOILETS	0	8	8		0	0	NONE PROPOSED			
TRAILER STATIONS	0	0	0		0	0	UNDETERMINED			
CAMPING										
PARKING SPURS (GRAVEL)	20	20	40		0	0	123	151	182	194
PICNIC TABLES	23	20	~~40~~ 43		0	0	123	151	182	194
FIREPLACES	20	20	40		0	0	123	151	182	194

See report of needs to NED - 1980 - 20?

* SCHEDULED FOR COMPLETION IN 1971

** BASED ON ER 1130-2-312 CRITERIA:

- 1 PICNIC TABLE PER 4000 ANNUAL VISITORS
- 1 PARKING SPACE PER TABLE
- 1 FIREPLACE PER 2 DAY-USE PICNIC TABLES
- 1 FIREPLACE PER CAMP SPUR
- 1 SHELTER PER 225 WEEK-END DAY VISITORS
- 1 LAUNCHING RAMP PER 40,000 ANNUAL VISITORS
- 10 CAR-TRAILER PARKING SPACES PER RAMP
- 2 PIT TOILETS PER 3000 WEEK-END DAY VISITORS
- 1 CAMP SPUR PER 7500 ANNUAL VISITORS

NOTES:

1. Primitive camping is permitted on appropriate Federal property - shorelands, islands, and sandbars.
2. No supervised river swimming areas are in operation.
3. Road access to the river exists at 18 rural locations within the 79 miles of mainland shoreline.

CORPS OF ENGINEERS

U.S. ARMY

PLATE V-1.2

SECTION VI

POOL RESOURCE MANAGEMENT

1. General. In keeping with the stated purpose of a Master Plan, the various physical features of the pool as well as plans for utilization and development of scenic, biologic, and recreational potential require examination and analysis. The purpose of a management program will be realized by orderly and controlled resource protection along with planned development.

2. Land use zoning. Section VI, chapter I, describes and outlines zoning classifications established to meet the criteria of a Master Plan development. Federal ownership of shorelands and islands does not exist in the extreme upper limits of the pool, but begins approximately one mile below the mouth of Rock River. Most of the shoreline under Federal ownership from this point downstream to the pool limits lies in Illinois. The island complex is extensive within the pool boundaries and is entirely under Federal title except for one major and two minor islands located in the upper third of the stretch.

Of the 4,746 acres of Federal land lying above flat pool, 4,722 acres, or 99.5%, is administered by the Corps of Engineers and the remaining 24 acres - the lower end of Arsenal Island - is controlled by the U.S. Army Weapons Command. Of the 2,783 acres of true island property, 98%, or 2,716 acres is owned in fee by the Federal Government. The Bureau of Sport Fisheries and Wildlife, Department of the Interior, has been assigned administrative responsibility for the wildlife resource on 4,492 acres, or 95%, of Corps administered land. A wildlife sanctuary has been established on 245 acres, or 5%, of the assigned area.

The 4,722 acres of land under title to the Federal Government, and administered by the Corps of Engineers, are classified for: recreation undeveloped - 3,346 acres, or 70%; recreation developed - 985 acres, or 21%; recreation commercial - 10 acres, or 0.4 of 1%; quasi-private use - 10 acres, or 0.4 of 1%; existing private use - 50 acres, or 1%; special use - 228 acres, or 5%; houseboat mooring sites - 3 acres, or 0.1 of 1%; and industrial use - 90 acres, or 2%.

3. Water zoning. Detailed water zoning is not considered as part of the Master Plan, although houseboat mooring sites - a classification of use - does necessarily have a bearing on

immediate water areas. Of the 12,047 acres of water surface at the flat pool elevation, 1,261 acres, or 10%, are classified as channel waters of 9-foot minimum depth with the remainder considered as off-channel waters. Submerged features in off-channel water, as located on the navigation charts, will not, in general, present hazards to small-boat operation in the approximate lower half of the pool. However, such features may be nearer the water surface in the upper pool reaches and require pleasure boating caution. No purpose would be served in publishing water depths in off-channel areas since fluctuating pool levels, changing currents, sandbar formation, etc., would soon render such information obsolete. Definite and enforced water zoning will become mandatory, at least in certain areas, as population and water-oriented recreational activities increase.

4. Timber management. Subsection 3 of section VIII, chapter I, describes and details the forest resources existing on Federal property along the Mississippi River as administered by the Corps of Engineers. Each Master Plan base map features a transparent overlay delineating the relative forest cover, species association, canopy and understory density, and management objectives. The management program, presently being restudied, may revise or modify objectives currently embodied. Section III, paragraph 4, of this Master Plan chapter enumerates the forest resource in terms of densities by acreages and percentages.

Management objectives for the forest resource existing on the 4,722 acres of Federal lands administered by the Corps of Engineers are presently defined as: 1,067 acres, or 22% - recreation developed; 235 acres, or 5% - recreation undeveloped; 3,379 acres, or 72% - wildlife waterfowl; and 41 acres, or 1% - wildlife, upland game. No timber products, such as sawlogs, pulpwood, etc., have been considered.

5. Wildlife management. The Bureau of Sport Fisheries and Wildlife, Department of the Interior, administered the only Federally-owned Mississippi River land, within the pool 16 area, prior to the 9-foot channel project. Additional lands were acquired as part of the construction program and that portion remaining above the flat pool elevation was assigned to the Corps of Engineers for administration. The Corps has outgranted the major part of these lands to the Bureau for fish and wildlife management purposes only under the General Plan and Cooperative Agreement. The Bureau, in turn, has outgranted certain areas to the bordering States for wildlife management. Corps lands outgranted to the Bureau are discussed in section III, paragraph 3, of this Master Plan chapter.

6. Shoreline ownership. Of the 231 miles of shoreline contained within the pool limits at the authorized flat pool elevation, 200 miles are owned by the Federal Government and 31 miles by others. Federal lands include 50 miles of mainland and 150 miles of island shoreline, all controlled by the Corps of Engineers except for 2 miles of island shoreline under the jurisdiction of the U.S. Army Weapons Command and approximately 1/2 mile assigned to the Bureau of Sport Fisheries and Wildlife of the Department of the Interior. Non-Federal interests control 29 miles of mainland and 2 miles of island shoreline.

7. Additional recreational developments.

a. Corps of Engineers. The Rock Island District presently operates three recreational sites within the pool limits. Expansion space is available in two of the areas and no new sites are presently recommended for development.

b. Bureau of Sport Fisheries and Wildlife. The Bureau has no immediate plans to locate recreational developments within the pool confines.

c. States.

(1) Iowa.

An office building and biological station is presently under construction on outgranted Federal land, near Fairport, Iowa, at an estimated cost of $30,000. A picnic and camping area, costing an estimated $3,000, will be developed at a later date. In addition, the Corps of Engineers is in the process of granting another 17.3 acres of land through a supplemental agreement to the existing lease contract for public park and recreational purposes. The total area will comprise 21.4 acres with an expenditure of $24,681 proposed to develop facilities on the additional area.

(2) Illinois.

Although considerably more Federal land exists along the Illinois shore, no suitable areas are present for a major State installation unless combined with adjacent non-Federal property. The State has no present plans for development of recreational facilities within the pool limits.

d. Counties.

(1) Scott (Iowa).

Comparatively little Federal land exists along the shore in the lower County limits and is not generally suitable for recreational development. The proximity of established recreational facilities, a short distance downstream, would not indicate interest on the part of Scott County in the foreseeable future.

(2) Muscatine (Iowa).

Since the Corps of Engineers presently maintains two developed recreational areas on well-situated Federal lands, and since a major State park is located a short distance inland, it is doubtful whether the county will consider a need for additional facilities.

(3) Rock Island (Illinois).

Although State law permits the establishment of a County conservation board, no such entity has been organized in Rock Island County. There is in existence, however, a Rock Island County Forest Preserve body which acts in basically the same manner, but is restricted to lands designated as forest preserves. The preserve presently operates 3 public use areas on Federal property in addition to a large park on non-Federal land abutting Government property. There is no intention, at present, to request Federal lands for the establishment of additional recreational facilities.

e. Municipal.

(1) City of Davenport, Iowa.

No Federally-owned lands exist along the river within the limits of the city, or immediately adjacent to such boundaries.

Plate VI-4.1 locates the small-boat harbor authorized by the River and Harbor Act of 1962. Preliminary planning is presently in progress.

(2) City of Rock Island, Illinois.

No Federally-owned lands exist along the river within the limits of the city. Suitable land does exist immediately downstream, with nearby access, which may interest the city after completion of the Interstate 280 highway by-pass bridge.

CORPS OF ENGINEERS

DAVENPORT

IOWA

CHICAGO, ROCK ISLAND & PACIFIC R.R.

SOUTH CONCORD ST.

DAVENPORT HARBOR

LAGOON

SMALL BOAT HARBOR

CREDIT ISLAND

PARK DRIVE

479.5

479

RIVER

MISSISSIPPI

PETTIFER ISLAND

ROCK RIVER

I. & M. CANAL

ILLINOIS

150'

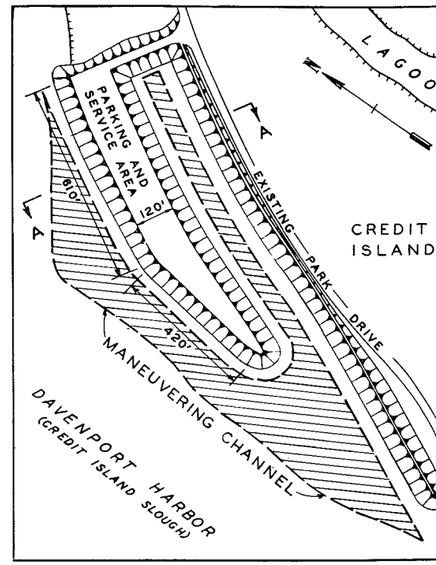
ENTRANCE CHANNEL

2000'±

LOCATION MAP

100 0 400 800

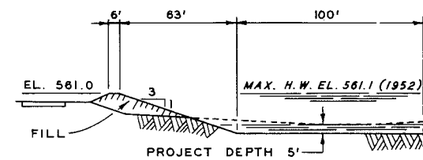
SCALE IN FEET



PLAN

100 0 100 200 300

SCALE IN FEET

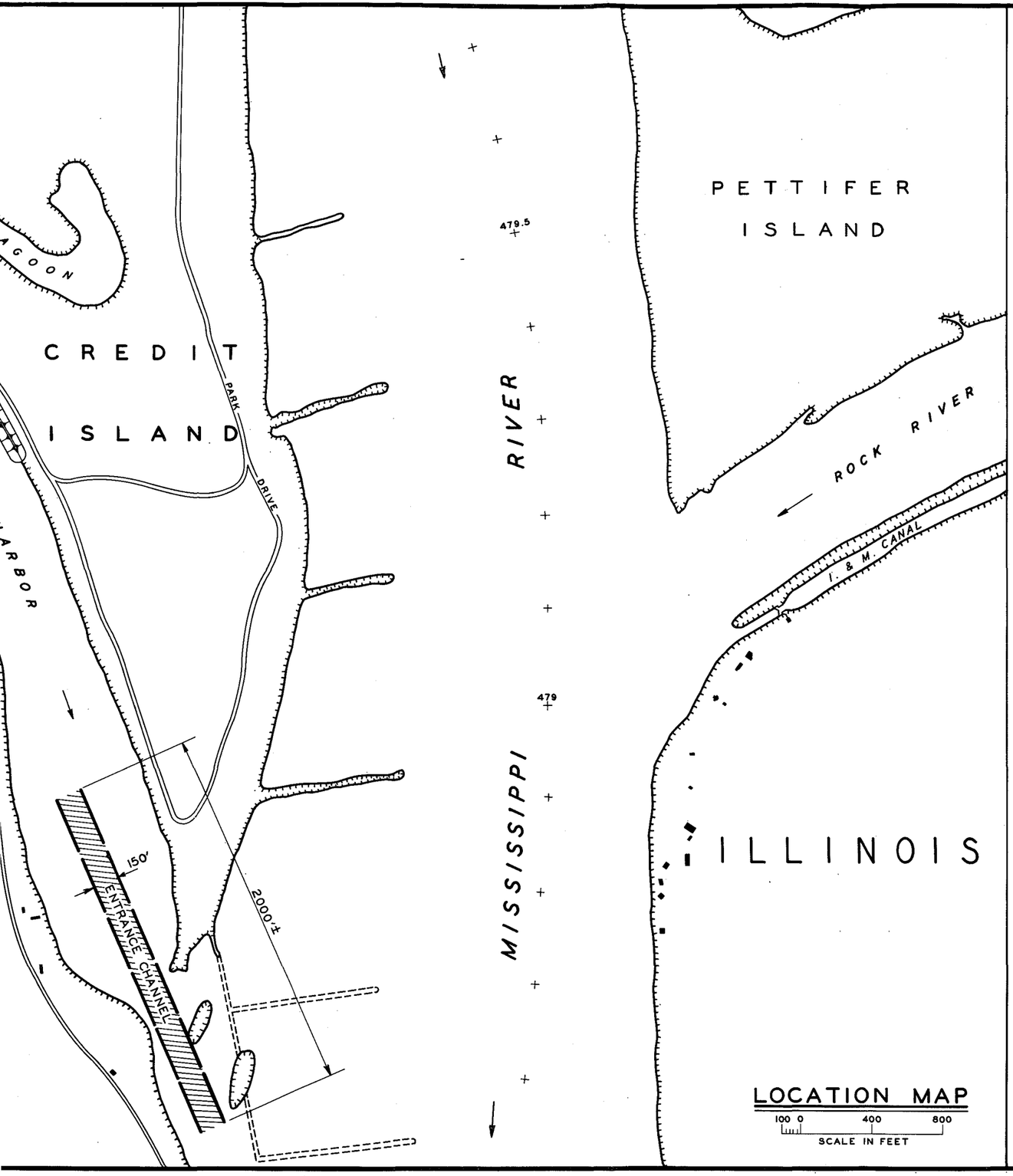


LEGEND

DREDGING

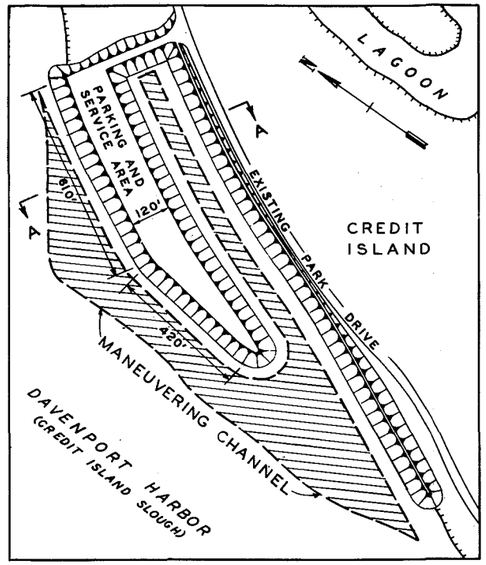
MILEAGE ORIGINATES
OHIO RIVER.

ELEVATIONS BASED O
LEVEL DATUM (1912 A



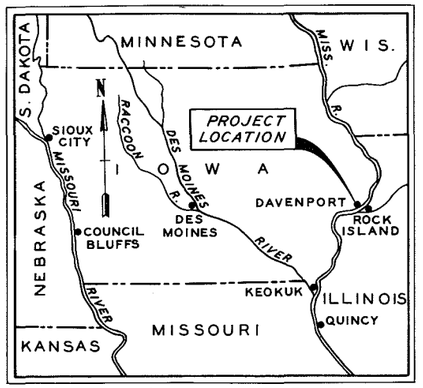
LOCATION MAP

100 0 400 800
SCALE IN FEET



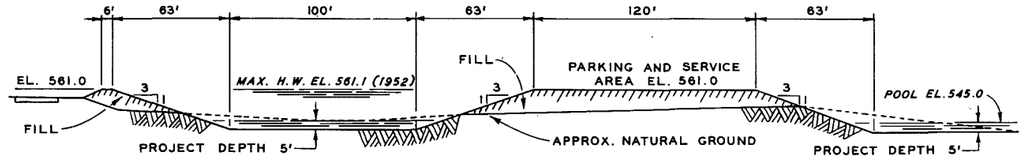
PLAN

100 0 100 200 300
SCALE IN FEET



VICINITY MAP

25 0 50 100
SCALE IN MILES



SECTION A-A

10 0 50 100
SCALE IN FEET

LEGEND

DREDGING

MILEAGE ORIGINATES AT MOUTH OF OHIO RIVER.

ELEVATIONS BASED ON MEAN SEA LEVEL DATUM (1912 ADJUSTMENT)

MISSISSIPPI RIVER
RIVER AND HARBOR PROJECT
DAVENPORT, IOWA
SMALL BOAT HARBOR

SCALES AS SHOWN

ROCK ISLAND DISTRICT

30 JUNE 1963

PLATE VI-4.1

Plate VI-5.1 locates the small-boat harbor authorized by the River and Harbor Act of 17 May 1950 providing for deepening and widening the entrance channel into Lake Potter. The project was completed in July 1956.

(3) Town of Buffalo, Iowa.

No Government-owned shoreline exists within the town limits or immediately adjacent to such boundaries.

(4) Town of Andalusia, Illinois.

Plate VI-5.2 locates the small-boat harbor authorized by the River and Harbor Act of 1962. Construction of the project was completed in November 1965.

Federal shoreline property extends along the entire riverfront of the town of Andalusia. A community activities center is located on Federal property and operated under license granted by the Corps of Engineers. The concentration of population is not sufficient to likely require additional recreational space in the foreseeable future.

(5) Village of Montpelier, Iowa.

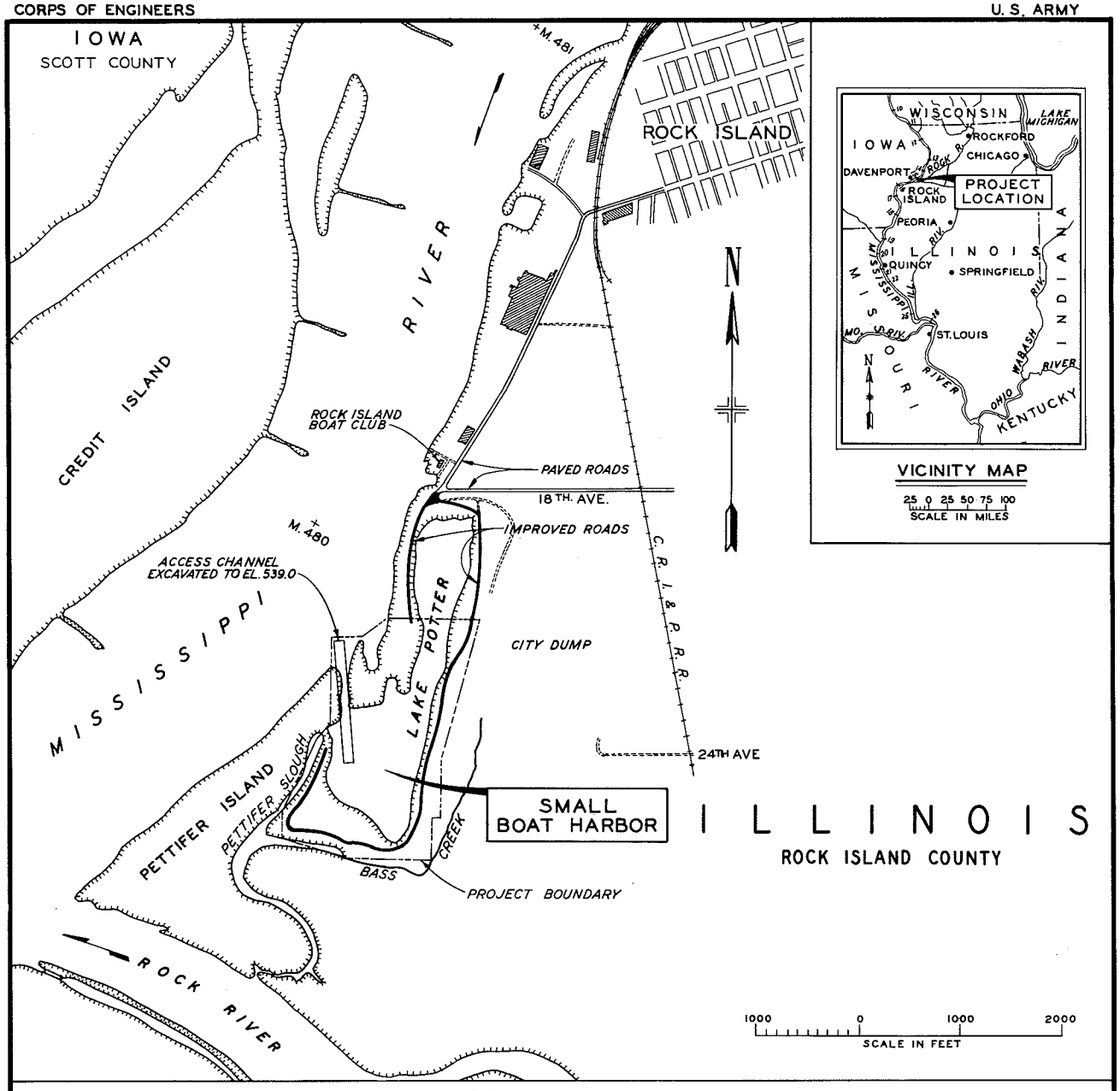
A sizeable public use area, operated by the Corps of Engineers, adjoins the community which does not have a population sufficient to warrant separate recreational facilities.

(6) Village of Fairport, Iowa.

A sizeable public use area, operated by the Corps of Engineers, is located approximately one mile upstream. The population of Fairport is not sufficient to warrant application for recreational space on Federal lands.

CORPS OF ENGINEERS

U. S. ARMY



VICINITY MAP

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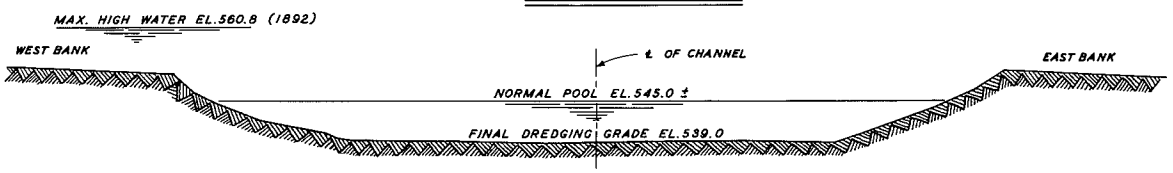
SCALE IN MILES

LOCATION MAP



TYPICAL SECTION- ACCESS CHANNEL

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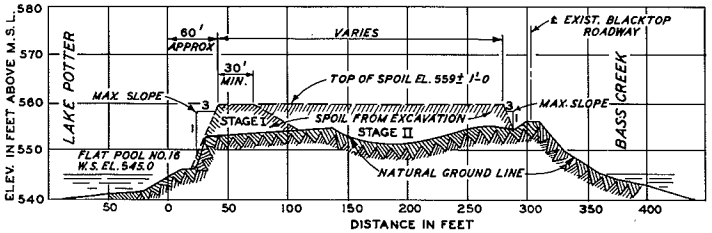
SCALE IN FEET



TYPICAL SECTION SPOIL AREA

50 0 50 100 150 200 250
SCALE IN FEET

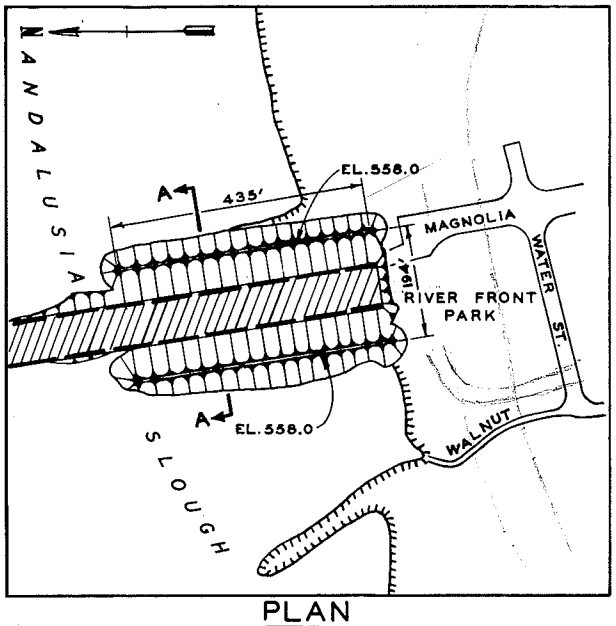
MILEAGE ORIGINATES AT MOUTH OF OHIO RIVER.
ELEVATIONS BASED ON MEAN SEA LEVEL DATUM (1912 ADJUSTMENT)

MISSISSIPPI RIVER
RIVER AND HARBOR PROJECT
ROCK ISLAND, ILLINOIS
SMALL BOAT HARBOR

SCALES AS SHOWN

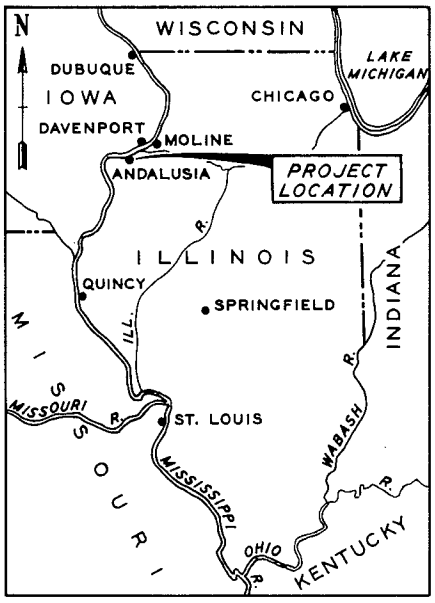
ROCK ISLAND DISTRICT
30 JUNE 1961

PLATE VI – 5.1



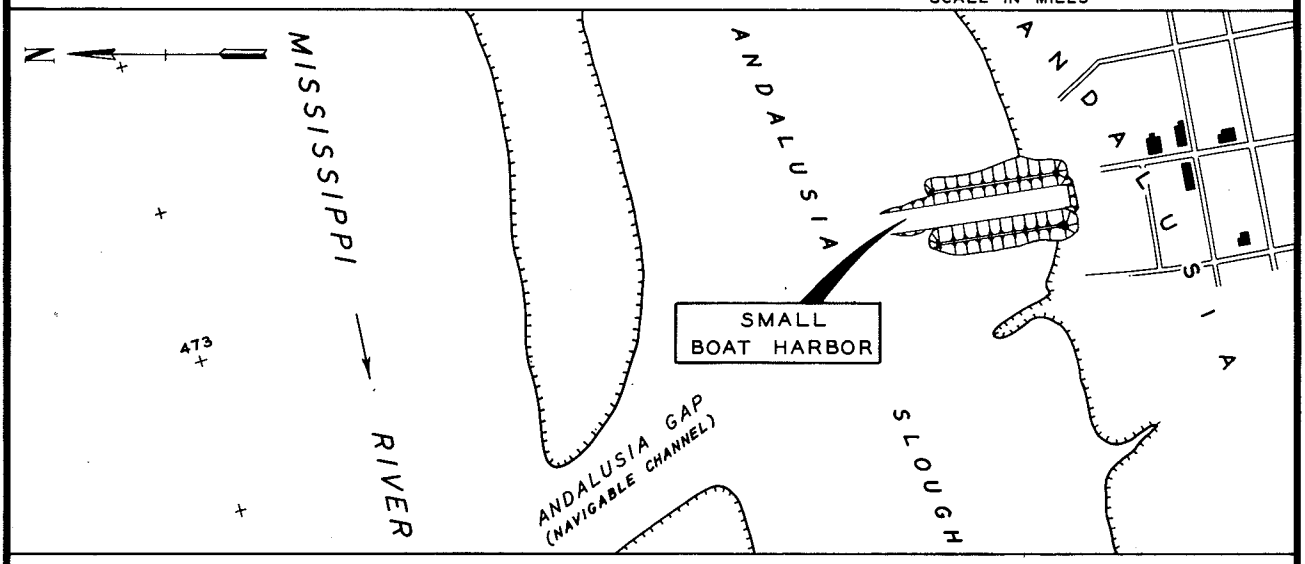
PLAN

100 0 200
SCALE IN FEET



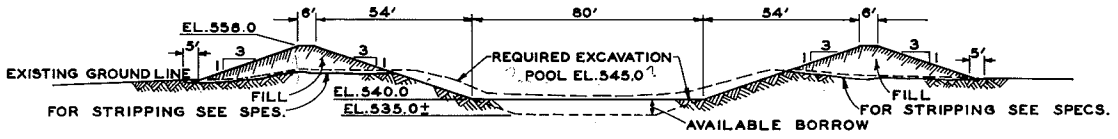
VICINITY MAP

25 0 25 50 75
SCALE IN MILES



LOCATION MAP

100 0 400 800
SCALE IN FEET



SECTION A-A

10 0 50 100
SCALE IN FEET

LEGEND

DREDGING

MILEAGE ORIGINATES AT MOUTH OF OHIO RIVER

ELEVATIONS BASED ON MEAN SEA LEVEL DATUM (1912 ADJUSTMENT)

MISSISSIPPI RIVER
RIVER AND HARBOR PROJECT
ANDALUSIA, ILLINOIS
SMALL BOAT HARBOR

SCALES AS SHOWN

ROCK ISLAND DISTRICT

30 JUNE 1966

SECTION VII

OPERATION AND MAINTENANCE

1. Pool Manager-Ranger. The need for and the suggested duties of a Manager-Ranger are outlined and explained in chapter I, section IX, Project Administration. Ranking in first place in recreational visitations, and with rather extensive Government land holdings, the pool should benefit from the administration of such a specialized position. Supervision of existing recreational facilities, examination of recreational potential, protection of timber resources, and general administration of Federal lands is becoming increasingly necessary as population and outdoor recreation constantly expand.

2. Recreation facilities maintenance. Responsibility for new construction and general maintenance within existing site limits rests with the Operations Division of the Rock Island District Office which assigns a field crew of 6 persons to accomplish the necessary work. Improvement, construction, and general maintenance on the 25 established Mississippi River public use areas continues throughout the year with occasional additional and temporary personnel employed as needed. The field crew supervisor also acts as a contracting officer in selecting private individuals who apply for seasonal employment for trash and garbage removal, grass cutting, sanitation upkeep, etc.

SECTION VIII

SUMMARY AND RECOMMENDATIONS

1. General summary. Considerable recreational potential exists on Federal lands within the pool limits in addition to the three Corps of Engineers developments and non-Federal facilities. The major potential is present along the Illinois shore since Federal lands on the Iowa side of the river are less extensive. The higher Iowa shore, especially in the upper reaches, is becoming industrialized on non-Federal property. Scenic and recreational values, however, need to be protected and reserved for the demands and needs of an expanding population with increasing means, mobility, and leisure time. Pool 16 may be regarded as of prime recreational importance because of its proximity to the major population concentration in the Rock Island District and its first-place rank in recreational visitation statistics.

2. Recommendations.

a. Consideration is recommended toward the establishment of the pool Manager-Ranger concept as outlined and explained in chapter I, section IX, paragraph 2. Considerable time and effort by personnel of the District Office could be eliminated, improved liaison should result with other Federal and non-Federal agencies, unauthorized use of Government land and acts of vandalism would be minimized, and closer public relations established as a result of this specialized position. Pool 16, ranking first in recreational visitations, is especially in need of the supervision such a position would offer.

b. The boat launching ramp at Andalusia Slough Public Use Area is becoming unusable, except in periods of higher than normal water elevations, because of silt depositions. Dredging is recommended at this location when funding will permit. A spoil area is readily available and will benefit the development. Water depths are adequate at the Montpelier and Shady Creek sites on the Iowa shore.

c. Crooked "S" Slough, in the vicinity of river mile 466.0, is an old and favorite entry-exit corridor for fishermen using the interior slough complex of Andalusia Island. Minor dredging is recommended, when funding will permit, to remove the silt deposits responsible for increasingly difficult small boat navigation.

d. Approval is recommended for the land use zoning established for Federal property as indicated on the transparent overlay sheets accompanying the Master Plan base charts of the pool. By order of the Chief of Engineers, private use leases shall cease to exist after 30 November 1988 and all such sites will be reclassified as to priority and use. However, the concept of a Master Plan allows for flexibility and is subject to continual review and revision. Other areas of priority, therefore, may be reclassified as demand and circumstances dictate before the elimination of private use sites. Existing private use leases are subject to cancellation, prior to the elimination date indicated, should a higher priority of use become apparent and be in the best interests of the Government.

3. Suggested future recreation facilities.

a. The island and slough complex lying along the Illinois shore, from river miles 475.0 to 478.0, is especially suited to the establishment of float-marked canoe trails, hiking and nature trails, and primitive camping. For some years a small excursion boat, operating from Davenport, Iowa, scheduled a very popular "jungle cruise" through this particular area. Water depths are no longer adequate for such type of recreational pursuit. Minor dredging and snag removal will be required for full development and access.

b. Excellent conditions exist for the location of a riverside hiking and nature trail extending from river mile 471.0 downstream to the Loud Thunder Forest Preserve Park. Such a trail would pass near several developed areas offering water, picnic, rest, and sanitary facilities.

c. The establishment of pool 16 created a veritable maze of sloughs and small islands in the lower half of Andalusia Island, river miles 464.0 to 470.0. The area offers outstanding potential for the location of canoe trails, primitive camping, and water-oriented sightseeing. Fishing opportunities, also, are unexcelled outside the established wildlife sanctuary reservation. Minor dredging and snag removal will be required as part of a development program.

d. An excellent location for a public use area is located on the Illinois shore at river mile 459.0 with a minimum of road access required. However, spoil disposal from future dredging would need to be placed before the area could be suitably developed.

e. Vantage points for sightseers, artists, and photographers could be located at strategic points of scenic interest, especially in areas affording an advantageous view of the spectacular Autumn vegetative coloring for which the river shores and hills are noted. The levee system, which begins in the lower pool area and continues generally through the remainder of the District, could be incorporated in establishing overlooks for scenic appreciation. Specific locations would need to be established by seasonal survey.

f. Rock jetties might be constructed along the shore of the public use areas for the convenience of shore fishermen. Locations could not interfere with boat launching facilities and would need approval of hydraulic specialists of the District Office who are concerned with navigational aspects of the river.

g. Sealed bulletin-board type displays might be erected at all three public use areas and feature identified specimens of the flora and fauna of the immediate area. Also general hunting and fishing information and regulations, littering appeal, and vandalism warnings could be included.

h. The constantly increasing use of the public use areas indicates the desirability of hard-surfaced access and circulation roads, water-borne sewage disposal, and lighting. Trailer sanitary stations are also a necessity, although space is only available at the Montpelier and Shady Creek developments.

i. Provision might be made at each public use area for a supply of postage-free cards which visitors could use to request recreational brochures and literature from the District Office, or for comments and suggestions. If litter results from such practice or supplies are otherwise misused, caretakers might distribute cards to interested parties, or information on procurement of literature could be posted on the previously suggested bulletin-board display.

SECTION IX

REVIEW OF PLAN

1. Real Estate Division.

Pursuant to paragraph 5b of ER 405-2-835, the Master Plan was submitted for review and the Real Estate Division concurs that the material was prepared in accordance with sound real estate acquisition, management and utilization practices.

C. E. KELLEY, Attorney
Chief, Real Estate Division

2. Operations Division.

Sections of this Master Plan, which have a direct or indirect bearing upon the operation and maintenance of the Mississippi River, have been coordinated with the Operations Division.

ROBERT E. CLEVENSTINE
Chief, Operations Division