

EXHIBIT 3

SECTION 404(b)(1) EVALUATION

MASTER PLAN  
DESIGN MEMORANDUM 6B  
SAYLORVILLE LAKE

MULTI-PURPOSE PROJECT  
DES MOINES RIVER BASIN  
DES MOINES RIVER, IOWA

EXHIBIT 3  
SECTION 404 (b)(1) EVALUATION

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Subject

Preliminary Section 404 (b)(1) Evaluation Report  
Public Notice  
Regulatory Permit Application



REPLY TO  
ATTENTION OF:

NCRPD-F

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

REVISED SAYLORVILLE LAKE MASTER PLAN  
POLK, DALLAS, AND BOONE COUNTIES, IOWA

CLEAN WATER ACT  
PRELIMINARY SECTION 404(b)(1) EVALUATION

OCTOBER 1983

ATTACHMENT 1 OF 1  
OF ENVIRONMENTAL ASSESSMENT

REVISED SAYLORVILLE LAKE MASTER PLAN  
 POLK, DALLAS, AND BOONE COUNTIES, IOWA  
 CLEAN WATER ACT  
 SECTION 404(b)(1) EVALUATION

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List of Plates\*

<u>No.</u>	<u>Title</u>
1	Project Location
3	Sandpiper Recreation Area
4	Second Marina - Lakeview Site
5	Second Marina - Prairie Flower Site

\* Refer to Environmental Assessment Plates (Exhibit 3)

PRELIMINARY SECTION 404(b)(1) EVALUATION  
REVISED SAYLORVILLE LAKE MASTER PLAN  
POLK, DALLAS AND BOONE COUNTIES, IOWA

I. Project Description.

A. Location. Saylorville Lake is located in central Iowa approximately 11 miles northwest of Des Moines, Iowa (see plate 1).

B. General Description. The revised Saylorville Lake Project Master Plan replaces the Master Plan approved on 4 February 1974. The purpose of the revised Master Plan is to provide an up-to-date comprehensive guide to the sensitive, wise, and orderly use, development, and management of the natural and manmade resources of the Saylorville Lake project over the next 5 years.

The existing and projected public recreational use at the project warrants the construction of additional recreation areas. Two of the proposed recreation areas, the Sandpiper Recreation Area and the Second Marina, require the preparation of a Section 404(b)(1) Evaluation Report and obtaining a 401 Certification from the State of Iowa.

The Sandpiper Recreation Area would be located at the southwest end of a peninsula along the east shoreline of the reservoir. The proposed area would contain a beach and sailboat launch facilities. Plate 3 displays a proposed peninsula to be constructed between the beach and sailboat launch area. The peninsula would be approximately 750 feet long, 100 feet wide, and 5 feet in height. The peninsula would require approximately 12,000 cubic yards of impervious material and 850 tons of riprap. The launch area will contain two hardened ramps, each being approximately 50 feet long, 14 feet wide, and 6 inches thick.

There are two sites for the second marina; only one of the two sites would be developed. The first site is located to the northwest of the existing Prairie Flower Campground (see plate 5). The second site is located directly southeast of the Lakeview Recreation Area (see plate 4). The marina may require pilings for the docks and the development of a break-water for wave and wind protection.

The development of the Sandpiper Recreation Area is dependent upon a 50/50\* cost-sharing partner (non-Federal government entity). The partner would be responsible for all management and maintenance cost once the area was constructed. The area would be developed as shown on plate 3.

Site plans for the second marina have not been developed. The second marina\* would require 100 percent construction funding by a non-Federal government entity as well as the facility maintenance and administration costs. If a developer would decide to establish a marina at one of the

\* Note discussions in Master Plan, Section I, subparagraph entitled Current Policy, page 3; and Section VI, subparagraph entitled Second Marina, page 129.

two sites, the site plans would be coordinated with the appropriate Federal, State, county, and local government entities for their review and comments prior to construction. In addition, a separate environmental assessment, Section 404 Evaluation report, and obtaining 401 certification from the State of Iowa for the second marina would be developed and coordinated before construction would take place.

C. Authority and Purpose.\* The Saylorville Lake Project was authorized for flood control in the Flood Control Act of 3 July 1958. This authorization was based upon recommendations established in Senate Document No. 9, 85th Congress, 1st Session. The development of recreation facilities at Saylorville was initiated at full Federal expense under the direction of Section 4 of the Flood Control Act of 22 December 1944. The development and construction of these facilities was continued at full Federal expense under the authorization of Section 111 of the Water Resources Development Act of 1976. On 1 October 1982, a new policy which required a 50/50 cost-sharing partner in order to construct new recreation facilities and/or improve existing recreation facilities at noncompleted reservoir projects was implemented. The new policy applies the principles of the Federal Water Project Recreation Act, 9 July 1965.

D. General Description of Fill Material. Material to be deposited for the peninsula will consist of approximately 12,000 cubic yards of inert and uncontaminated impervious material and 850 tons of riprap. The concrete ramp will extend into the water approximately 12 feet. Approximately 30 cubic yards of fill will be used as a foundation base for the ramps. The beach area is a natural sand beach and would not require any fill. Both fill materials will be obtained from an approved site and/or from a gravel company. At this time, it is not known how much fill material would be used to establish a breakwater for the second marina. A separate 404 Evaluation Report would be developed if a developer would be found for the second marina. The report would be coordinated with the proper agencies for review and approval prior to construction.

E. Description of the Proposed Discharge and Site.

1. Sandpiper Recreation Area. The proposed peninsula and launch area is currently inundated with 1 to 6 feet of water at conservation pool elevation 836 NGVD. The benthic habitat of the proposed area consists of sand (alluvial) 3 to 4 feet thick covered by a layer of silt 6 to 12 inches thick which is over shale. The shoreline of the area consists of sandy loam soils which are vegetated in grasses and forbs.

2. Second Marina - Prairie Flower Site. The proposed marina area (i.e., docks, breakwater, etc.) is currently inundated with 8 to 15 feet of water at conservation pool elevation 836 NGVD. The benthic habitat for the Prairie Flower Site is clay (alluvial) 3 to 4 feet thick

\* Note discussion in Master Plan, Section I, subparagraph entitled Current Policy, page 3.

over a layer of alluvial sand which is over shale. The shoreline of the area consists of a Lester-Colo complex soil attributed to the slope of the area. The area is vegetated with an uneven age stand of hardwood and bottom land species. A flat open upland area to the east of the shoreline would be the major area of development for this proposed site. The soils in this area of the site are loams.

3. Second Marina - Lakeview Site. The proposed marina area (i.e., docks, breakwater, etc.) is currently inundated with 8 to 25 feet of water at conservation pool elevation 836 NGVD. The benthic habitat for the Lakeview site is clay (alluvial) 3 to 4 feet thick over a layer of alluvial sand which is over shale. The shoreline of the area is a shallow Lester-Colo complex soil over bedrock. Soil was removed from the shoreline area in order to construct the dam for the reservoir. The area is revegetated with a mowed grass lawn and sections of grasses and forbs.

## II. Factual Determinations.

### A. Physical Substrate Determination.

1. Substrate Elevation and Slope. The elevation of the substrate in the area on which the peninsula would be constructed will be altered. The elevation range from the shoreline to the west end of the proposed peninsula is approximately 6 feet (830-836 NGVD). This area would be filled with impervious material and riprap which would eliminate approximately 1.7 acres of substrate. The side slopes of the peninsula would have a 3 on 1 slope. The proposed peninsula would not have an effect on bedload sediment in the area of the proposed recreation area or the lake.

2. Sediment Type. Approximately 12,000 cubic yards of impervious material will be deposited to construct the peninsula. Approximately 850 tons of riprap would be placed along the side of the peninsula to protect it from wind and wave action. This would be a significant change in the substrate material compared to the 3 to 4 feet of sand with a layer of silt now present. The two launch ramps require a foundation of approximately 30 cubic yards of gravel. The substrate is the same in the launch ramp area as within the proposed peninsula.

3. Dredge/Fill Material Movement. Due to the large amount and size of the rock used, off-site migration of the impervious fill is not expected in the peninsula area. No migration of gravel is expected to occur in the launching area.

4. Physical Effects on Benthos. The benthic life will increase in locations where riprap will be placed along the side of the peninsula. The nature of the substrate now present does not appear to support a significant variety or abundance of benthic life. The riprap will provide an ideal habitat for many invertebrate species.

5. Actions Taken to Minimize Adverse Effects. The use of riprap will improve aquatic habitat for a range of aquatic organisms. The contractor(s) for the proposed peninsula and launching ramps will

be required to follow practices to reduce the potential of turbidity and other environmental impacts during construction by following guide specifications CW-01430-July 1978.

B. Water Circulation Fluctuation and Salinity Determination.

1. Water.

- a. Salinity. Not applicable.
- b. Water Chemistry. No effect.
- c. Clarity. Temporary increases in turbidity during construction.
- d. Color. No effect.
- e. Odor. No effect.
- f. Taste. No effect.
- g. Dissolved gas levels. No effect.
- h. Nutrients. No effect.
- i. Eutrophication. No effect.

2. Current Patterns and Circulation.

a. Current Patterns and Flow. The proposed peninsula, launch ramps, and breakwater would have an effect on currents and flow within the area where they would be constructed. Currents and flows would be reduced due to wave and wind action being impeded by the breakwater (Second Marina) and the peninsula (Sandpiper Recreation Area). These effects are considered to be minor and localized in nature with no effects concerning turbidity or suspended particulates. The launch ramps would not have an effect on current and circulation patterns.

b. Velocity. Velocities will not be affected by the proposed peninsula or breakwater.

c. Stratification. No effect.

d. Hydrologic Regime. There will be no significant effect in the hydrologic regime.

3. Normal Water Level Fluctuations. No effect.

4. Salinity Gradients. Not applicable.

5. Actions That Will Be Taken to Minimize Impacts. The contractor(s) for the proposed breakwater, launching ramps, and peninsula would be required to follow practices to reduce the potential for environmental impacts (i.e., turbidity, etc.) during construction in accordance with guide specifications (CW-01430-July 1978). Inert and uncontaminated impervious material and riprap would be utilized to construct the peninsula for the Sandpiper Recreation Area.

C. Suspended Particulate/Turbidity Determinations.

1. Expected Changes in Suspended Particulates and Turbidity in Vicinity of Disposal Sites. No effect.

2. Effects on Chemical and Physical Properties of the Water Column.

a. Light Penetration. No effect.

b. Dissolved Oxygen. No effect.

c. Toxic Metals. No effect.

d. Pathogens. No effect.

e. Aesthetics. No effect.

3. Effects on Biota.

a. Primary Production, Photosynthesis. A slight decrease in the flow and current in the immediate area of the peninsula and breakwater may have a small positive impact on the populations of phytoplankton and floating macrophytes. The launch ramps will not have an effect on biota.

b. Suspension/Filter Feeders. Invertebrate populations of mayflies, caddisflies, stoneflies, etc., will increase on the substrate provided by the riprap.

c. Sight Feeders. Invertebrate organisms as in b. above will increase.

4. Actions Taken to Minimize Impacts. No special precautions needed.

D. Contaminant Determinations. Fill material will be clean and uncontaminated and will not cause the release of undesired contaminants into the environment.

E. Aquatic Ecosystem and Organism Determinations.

1. Effects on Plankton. No effect other than that previously mentioned in Section C.3.a. No specific testing was done.

2. Effects on Benthos. Invertebrate organisms will colonize the solid substrate provided by the submerged riprap which would protect the peninsula from wave action.

3. Effects on Nekton. Fish populations will benefit from the riprap along the peninsula and riprap, through invertebrate colonization, will provide an excellent food source and provide possible spawning sites.

4. Effects on Aquatic Food Web. The proposed peninsula would have an overall beneficial effect on the food web by increasing production at the lower trophic levels. The launch ramps will not have an effect on the aquatic food web.

5. Effects on Special Aquatic Sites.

a. Sanctuaries and Refuges. The project would have no effect on sanctuaries and refuges.

b. Wetlands. No wetlands will be affected.

6. Threatened and Endangered Species. Two federally listed endangered species may occasionally occur in the reservoir area: the bald eagle (Haliaeetus leucocephalus) and the peregrine falcon (Falco peregrinus).

Bald eagles occur in the reservoir area primarily during the winter months. The eagles use trees adjacent to the reservoir and outlet structure for perching and open water areas in the winter months for feeding. Perching trees adjacent to the reservoir and outlet structures as well as winter open water areas would not be disturbed by the proposed recreation areas.

The peregrine falcon may be present in the project area during the spring and/or fall migration periods. There are no recorded sightings of the falcon within the project area but there have been recorded sightings within the region. The project contains a small amount of habitat which would be favorable to the falcon during the migration seasons. This habitat consists of nonforested open areas adjacent to the former river valley. This habitat would not be impacted by the proposed recreation areas and is not utilized for recreation purposes from mid-fall to late spring. The proposed Sandpiper Recreation Area (and peninsula) and both sites for the Second Marina (and breakwater) would not have an effect on the habitat required and used by the endangered species. The U.S. Fish and Wildlife Service, Rock Island Field Office, has indicated that the proposed actions will have no effect on endangered species (see the attached telephone conversation record).

F. Proposed Disposal Site Determination.

1. Mixing Zone Determination. The fill material is inert and will not mix with water.

2. Determination of Compliance with Applicable Water Quality Standards. Due to the nature of the fill material, all discharges are anticipated to be in compliance with State of Iowa standards.

3. Potential Effects on Human Use Characteristics.

- a. Municipal and Private Water Supply. No effect.
- b. Recreation and Commercial Fisheries. The peninsula, launching ramps, and breakwater are expected to benefit sport fishing. There is no commercial fishing in the lake.
- c. Water-Related Recreation. Recreation would be enhanced by the proposed recreation facilities.
- d. Aesthetics. Newly deposited riprap along the proposed peninsula and breakwater would be in contrast to the natural shoreline. Through weathering the rock would eventually blend with the shoreline and vegetation within the area. The placement of the launching ramps will have a minor, if any, effect on aesthetics within the area. Landscape plantings will be placed in the Sandpiper Recreation Area to enhance its aesthetics.
- e. Parks, National and Historic Monuments, National Seashores, Wilderness Area, Research Sites and Similar Preserves. No effect.

G. Determination of Cumulative Effects on the Aquatic Ecosystem.  
No detrimental cumulative impacts are anticipated because of the peninsula, launching ramps, or breakwater.

H. Determination of Secondary Effects on the Aquatic Ecosystem.  
No adverse secondary effects on aquatic resources are anticipated. Several beneficial secondary effects, as already discussed, are likely to occur.

III. Finding of Compliance or Non-Compliance With the Restrictions on Discharge. No significant adaptations of the guidelines were made relative to this evaluation.

Other alternatives considered were variations of the present peninsula and launching ramps design for the Sandpiper Recreation Area. These designs would have similar impacts. It was determined that these designs would be less effective for providing a protected launching area for nonmotorized craft and an additional protected area for swimming (see plate 3). The alternative of "no action" would result in the continued overuse of the existing beach and launching ramps and would not fulfill the existing or future recreation needs of the general public.

The proposed discharge for the peninsula will comply with applicable state water quality standards.

There will be no significant adverse effects on aquatic resources, endangered species, recreational opportunity, aesthetics, economic values or human health and welfare.

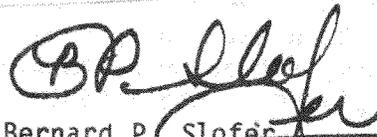
The peninsula has been designed to benefit (or mitigate impacts to) recreation and aquatic resources.

If a developer is found for a second marina, a Section 404 Evaluation Report would be prepared at that time for the review of various government entities and the general public. The report would provide specifics on which site would be developed, and the amount and type of fill to be utilized for the breakwater. The development and management cost of the second marina would be totally borne by the developer. At this time, no developer has been found for the second marina.

On the basis of the 404(b)(1) guidelines, the proposed disposal site for (the Sandpiper Recreation Area peninsula) the discharge of fill material is in compliance.

21 DEC 83

DATE



Bernard P. Slofer  
Colonel, Corps of Engineers  
District Engineer



US Army Corps  
of Engineers  
Rock Island District

# Public Notice

Applicant:

Date:

U.S. Army Corps of Engineers 19 September 1983

In Reply Refer to:

Section:

NCROD-S-070-0X6-1-111280

404

## 1. General Information.

a. Applicant. U.S. Army Corps of Engineers, Rock Island District, Rock Island, Illinois 61201.

b. Project Location. Saylorville Lake, Des Moines River, in Section 13, Township 80 North, Range 25 West near Polk City, Polk County, Iowa.

### c. Project Description.

(1) The Revised Saylorville Lake Master Plan proposes the development of the Sandpiper Recreation area (under a 50/50 cost-sharing agreement). Two facilities, a beach and sailboat launch, would be separated by a proposed peninsula 750 feet long, 100 feet wide and 5 feet high. The peninsula would provide two protective coves for the beach and launch area and serve as a breakwater for the launch ramp. The peninsula would require 12,000 cubic yards of impervious material and 570 cubic yards of riprap. Inert and uncontaminated impervious material and riprap would be used to construct the peninsula. The launching ramp will be U-shaped with two 7-foot wide ramps constructed of concrete laid over approximately 30 cubic yards of coarse gravel. To date, no cost-sharing partner has been found.

(2) The plan also designates the development of one of two proposed sites for a second marina. The development of the second marina would require 100 percent funding by a non-Federal government entity. As a result, no site plan(s) have been developed for the second marina. During the planning and design stage it may be determined that a breakwater is needed. At that time, Section 404 processing of the project plans will be made if appropriate.

d. Project Plans. The project plans have been reproduced on the attached sheet(s).

## 2. Agency Review. The project plans are being processed as follows:

a. Department of the Army, Corps of Engineers. The project plans are being processed under the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344).

b. State Water Quality Certification/Review. Application has been made to the Iowa Department of Water, Air and Waste Management for state water quality certification of the proposed work in accordance with Section 401 of the Clean Water Act. The project plans have also been submitted to the Iowa Conservation Commission for review.

3. Historical/Archaeological. The staff has consulted the latest published version of the National Register of Historic Places and found no registered properties, nor properties eligible for inclusion therein, that would be affected by the applicant's proposed activity. However, presently unknown archaeological, scientific, prehistoric, historic, or historical data may be lost or destroyed by the proposed work.

4. Endangered Species. Preliminary review by District staff indicates that the proposed activity is not likely to jeopardize the continued existence of any species or the critical habitat of any fish, wildlife, or plant which is designated as endangered or threatened pursuant to the Endangered Species Act of 1973 as amended (16 U.S.C. 1531 et seq.). Therefore, no formal consultation request has been made to the United States Department of the Interior, Fish and Wildlife Service.

5. Dredge/Fill Material Guidelines. The evaluation of the impact of the proposed activity on the public interest will also include application of the guidelines promulgated by the Administrator of the United States Environmental Protection Agency under authority of Section 404(b) of the Clean Water Act (40 CFR Part 230).

6. Public Interest Review. The decision whether to proceed with the project will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety production and, in general, the needs and welfare of the people.

7. Who Should Reply. Any interested parties, particularly navigation interests, Federal and state agencies for the protection of fish and wildlife, and the officials of any state, town, or local association whose interests may be affected by the proposed work, are invited to submit to this office within 21 days from the date of this notice written statements of facts, arguments, or objections thereto. These statements should bear upon the adequacy of plans and suitability of locations and should, if appropriate, suggest any changes considered desirable.

8. Public Hearing Requests. Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided.

9. Where to Reply. All replies to this public notice should be addressed to the District Engineer, US Army Corps of Engineers, Rock Island District, ATTN: Planning Division, Clock Tower Building, Rock Island, Illinois 61201. Mr. Tim Toplisek, telephone number 309/788-6361, extension 6386, may be contacted for additional information.

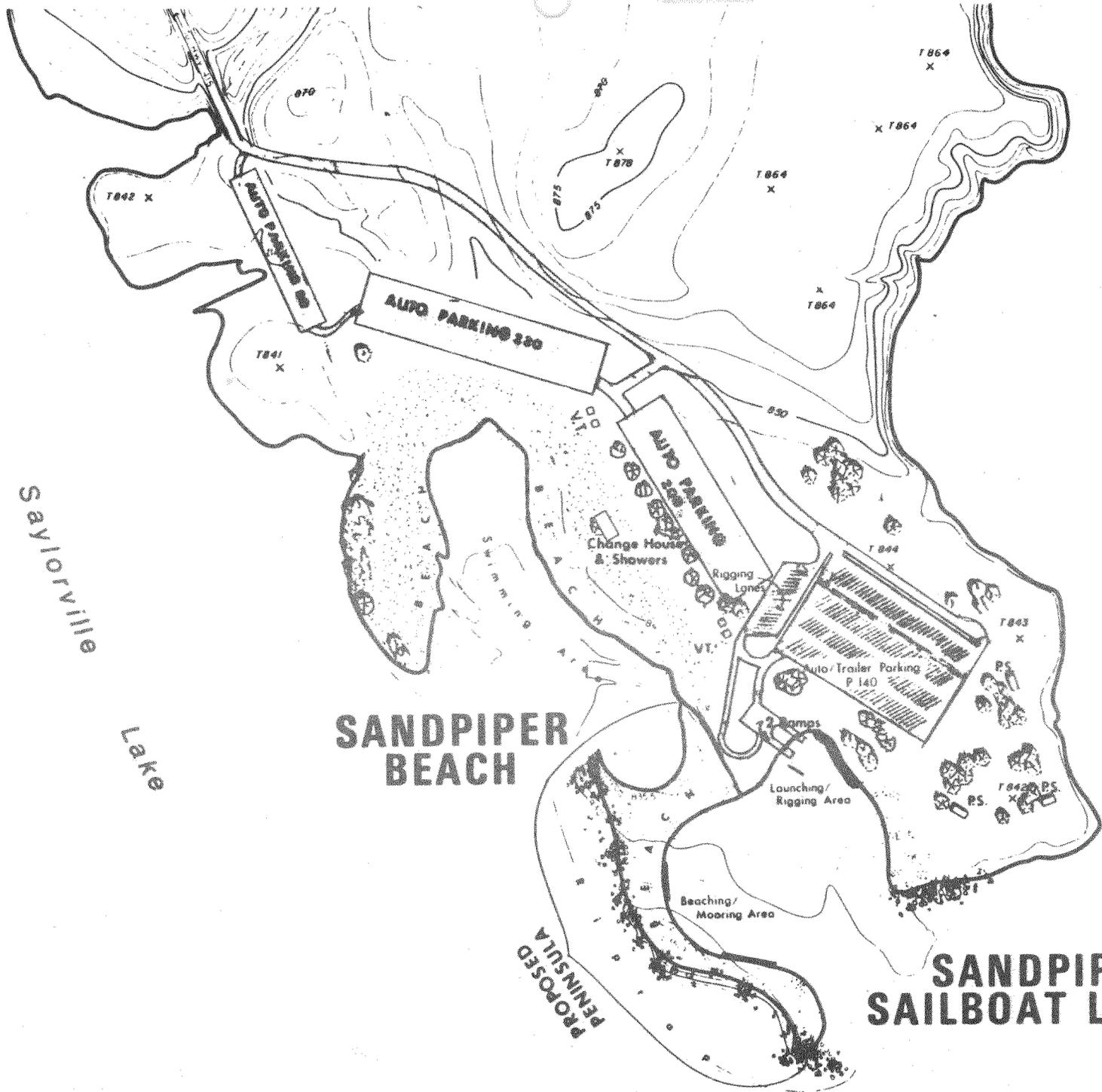


Bernard P. Slofer  
Colonel, Corps of Engineers  
District Engineer

Attach  
Plan

NOTICE TO POSTMASTERS:

It is requested that this notice be conspicuously and continuously posted for 21 days from the date of issuance of this notice.



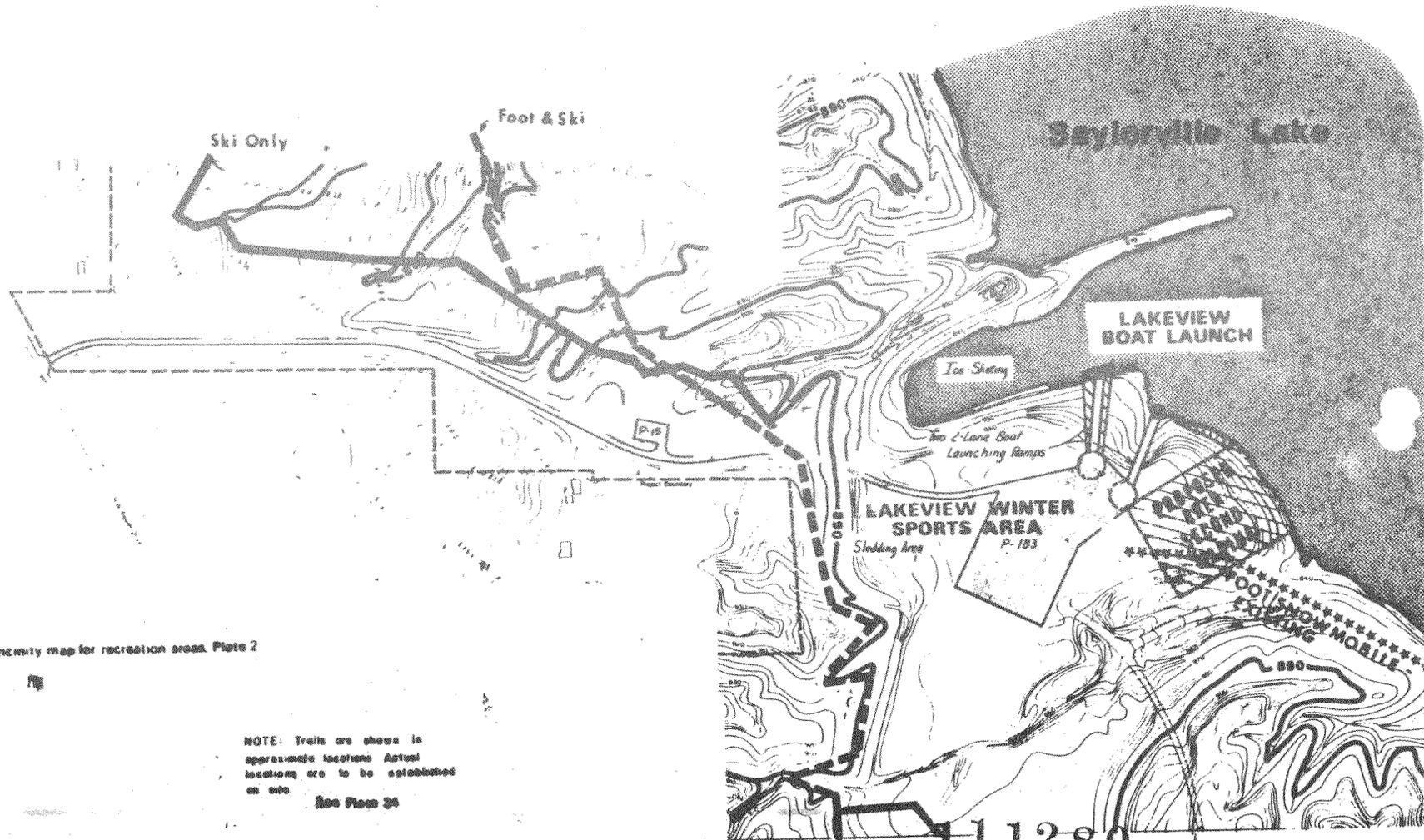
Saylorville

Lake

**SANDPIPER BEACH**

**SANDPIPER SAILBOAT LAUNCH**

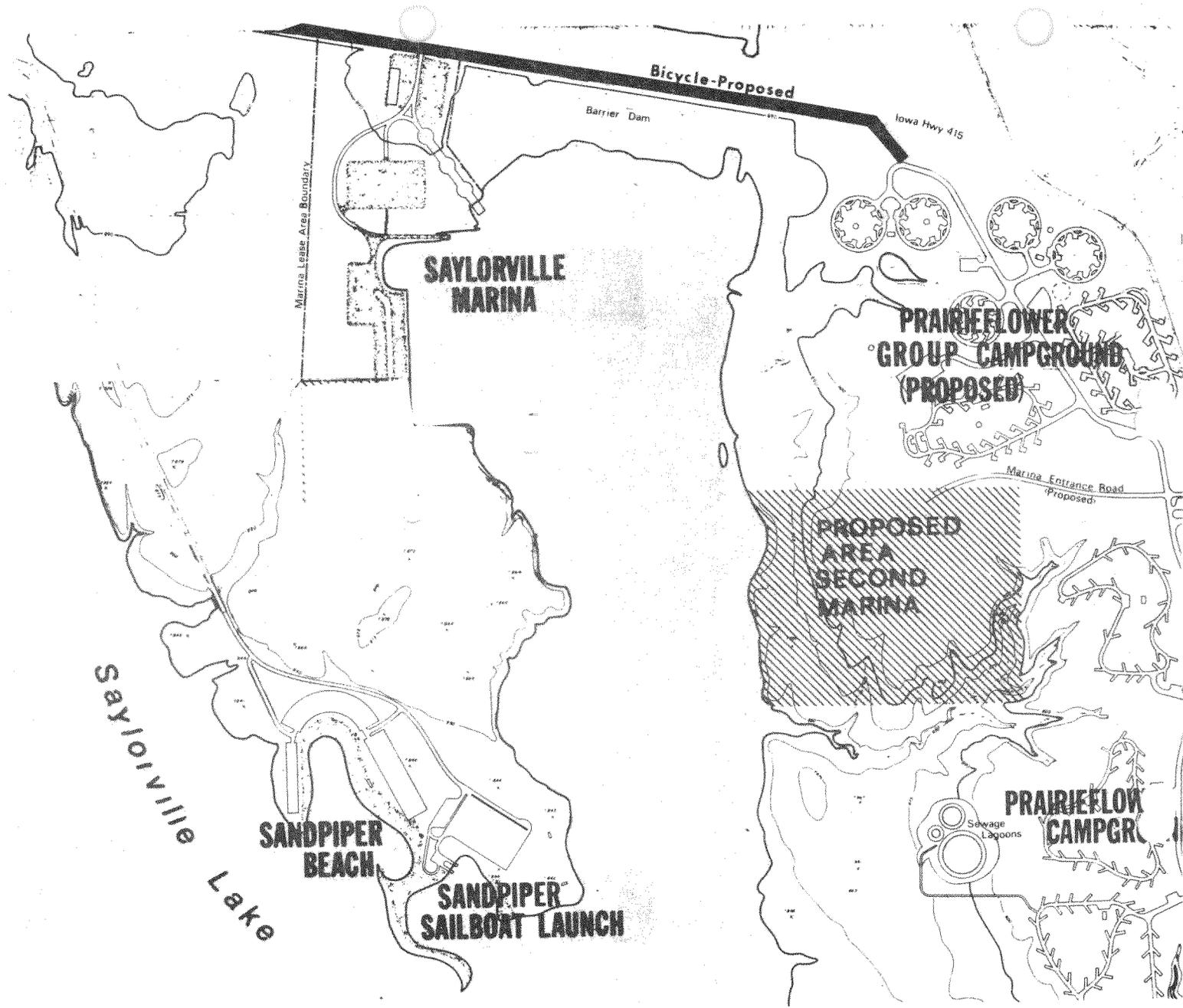
→ To Saylorville Marina



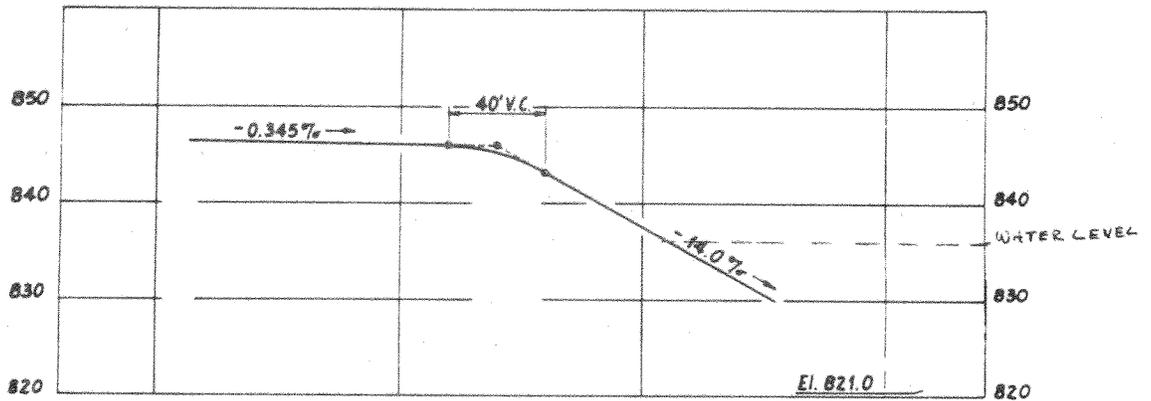
See vicinity map for recreation areas, Plate 2

NOTE: Trails are shown in approximate locations. Actual locations are to be established on site.

See Plate 24



# PROPOSED PLAN-SANDPIPER SAILBOAT LAUNCH



10 0 50 100 150  
SCALE IN FEET