

ORLPD-R (5 Mar 79)

SUBJECT: Draft Updated Master Plan, Brookville Lake, Indiana, DM #15

TO Ch, Real Estate Div FROM Ch, Plng Div DATE 4 Oct 79 CMT 3  
ATTN: ORLRE-M Dooley/35/5724

1. Reference your CMT 2 dated 6 April 1979.
2. The following information is to clarify several points in your CMT 2.

a. Reference paragraph 2b. It is our understanding that the 21.90 acres for water withdrawal is an easement and as such was included in the lease to the State of Indiana. Project operations land is 548 acres which includes all Corps operated facilities in the area including the Dam and Tailwater Area and the Bonwell Hill Overlook.

b. Reference paragraph 2d. Facilities in Whitewater State Park have been shown in the new Master Plan.

c. Reference paragraph 2e, 2h, and 2i. See the discussion in 2a above.

d. Reference paragraph 2f. Acreage figure for Mounds Area is 2,115.

e. Reference paragraph 2g. A marina was originally planned as part of the Mounds Area, however, during engineering studies it was moved to the west side of the lake and is not considered a part of the Mounds Area. A marina planned as a future item at the Fairfield Ramp Area has been deleted from current plans.

f. Reference paragraph 2j. Residences are being deleted from plans.

3. Some changes of designation or name should end the confusion on the names of several sites (see attached map):

a. Garr Hill Boat Ramp is separated from the Mounds Area by Franklin Creek. This ramp does not share entrance or facilities with Mounds in any way. It is a fisherman access ramp, as planned.

b. Templeton Creek Boat Ramp is used as a campers' ramp in the Mounds Area. This ramp cannot be reached except through the Mounds Area and should be considered a part of it. Its acreage is included in Mounds total of 2,115 acres.

*Key to Reference*

ORLPD-R

4 Oct 79

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c. There is no beach in the Fairfield Ramp area and a future beach planned for that area has been deleted from current plans. A beach is located in the Mounds Area, is a part of that area, and is called Mounds Beach.

d. To end confusion in the Bonwell Hill area, the part managed by the state is called the Bonwell Hill Boat Ramp and should retain the designation Site 1a. The Corps managed area located in the Corps operations area is called the Bonwell Hill Overlook, or simply the Overlook.

4. If any confusion still remains, please contact PD-R so this matter can be resolved.



JENKINS

4 Incl  
wd incl 1, 2, & 3  
added 1 incl  
4. Map

# DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGCEN.

REFERENCE OR OFFICE SYMBOL

SUBJECT

ORLRE-M

Draft Updated Master Plan,  
Brookville Lake, Indiana, DM  
No. 15

TO Ch., Planning Div  
ATTN: ORLPD-R

FROM Ch., Real Estate Div

DATE 6 April 1979 CMT 1  
Mr. Ashcraft/tw/5759 CMT 2

1. Reference ORLPD-R DF dated 5 March 1979, subject as above.
2. The plan represents an excellent and very comprehensive analysis of Brookville Lake. The following comments are noted:
  - a. Page 1, 3rd para. - Should reference lease rather than license.
  - b. Page 5, Section 1-05 - There is a third lease entailing some 21.90 acres for water withdrawal purposes by the State of Indiana, DNR. Project operations entail some 441.35 acres and there are two Corps operated public use areas at a total of 85 acres.
  - c. Page 9, 4th para. - Suggest that "and numerous outbuildings" be inserted between houses and on.
  - d. Page 17, Section 5-05 - The state recently submitted a substantial listing of facilities to be developed in and around the Whitewater State Park. You may wish to reflect these developments in the new MP.
  - e. Page 31, Section 7-01 (a) - Please reference previous statement on operations area, recreation sites, and the water contract.
  - f. Page 41, Para (f) - Is the acreage figure for this site correct, particularly considering that Pg. 42, Sect. 3, indicates that the campground encompasses 220 usable acres.
  - g. Page 45-46 - Are the Fairfield marina and ramp areas being segmented into separate sites? *See beyond*
  - h. Page 62, Section 9-02 - Should specify Treaty Line lease and water lease.
  - i. Page 63, last para - Should be revised in accordance with previous discussion of project acreage.
  - j. Plate No. 2 - Are two residences still proposed for development at this project?
3. It appears that little was accomplished toward rectifying the confusion concerning several of the access sites; i. e., there is one Bonwell Hill Site, yet the state manages the ramp area and the Corps manages the overlook. The Mounds Site is likewise confusing - it appears that the Fairfield beach, Garr Hill Site 3A, and Templeton Creek Site F are all within the Mounds Site, according to existing mapping.

3 Incl

1. DF ORLPD-R 5 Mar 79
2. DF ORLOP-R 21 Mar 79
3. Updated Master Plan

  
BOHRER



# DISPOSITION FORM

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REFERENCE OR OFFICE SYMBOL

ORLPD-R

SUBJECT

Draft Updated Master Plan, Brookville Lake,  
Indiana, DM No. 15

~~TO:~~ Ch, Opers Div ✓  
~~Ch, Engrg Div~~  
to: Ch, Real Estate Div  
~~Ch, Program Dev Ofc~~

FROM Ch, Plng Div

DATE 5 Mar 79

CMT 1

Dooley/25/5724

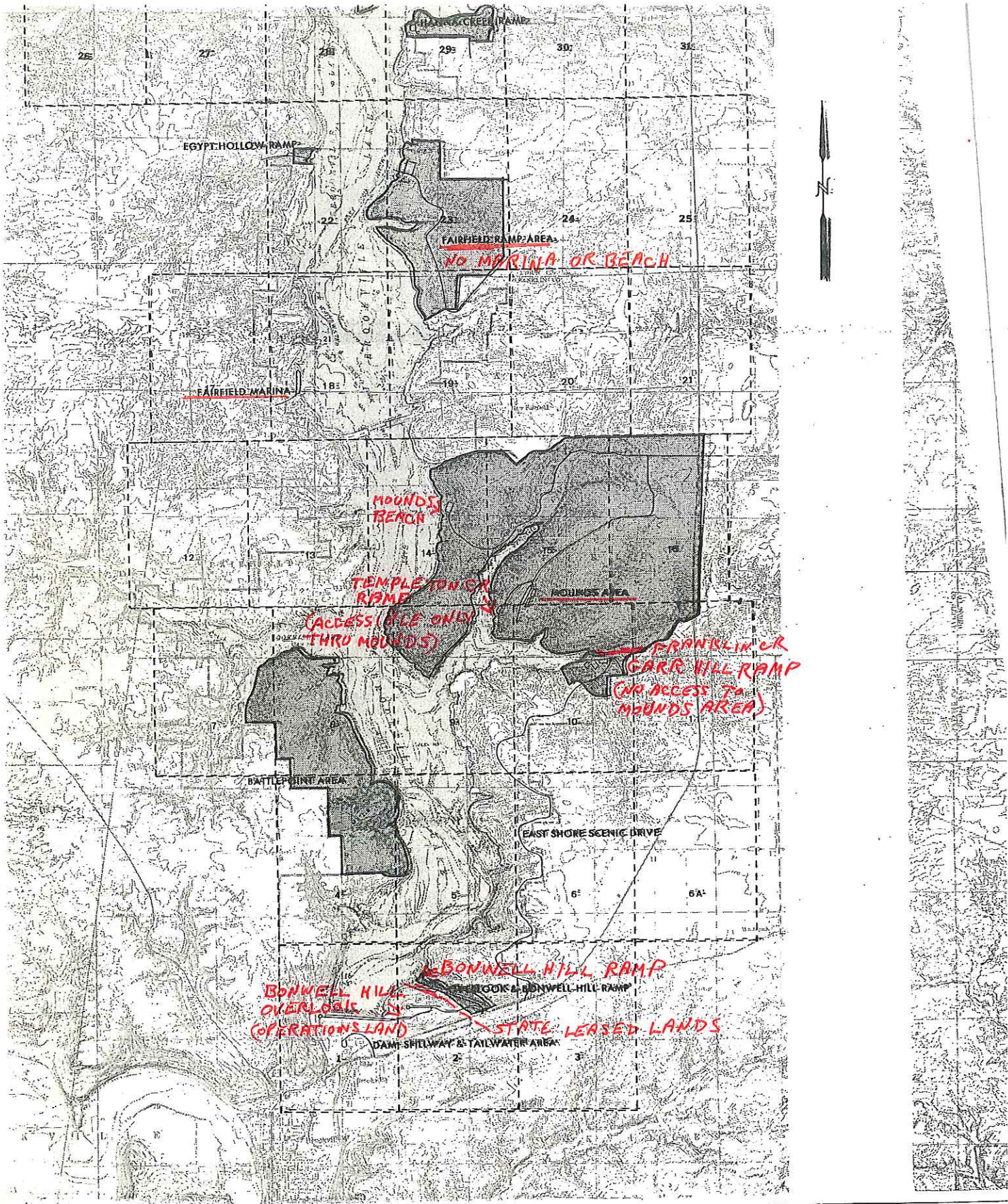
1. Inclosed for your review is a draft of the updated Master Plan for Brookville Lake.

2. Please review and provide PD-R with any comments you might have.

1 Incl  
as

*Wozniak*  
for JENKINS





EGYPT HOLLOW RAMP

CHICKEN CREEK RAMP

FAIRFIELD RAMP AREA

NO MARINA OR BEACH

FAIRFIELD MARINA

MOUNDS BEACH

TEMPLETON CR RAMP

(ACCESSible ONLY THRU MOUNDS)

MOUNDS AREA

FRANKLIN CR

(GARR HILL RAMP (OR ACCESS TO MOUNDS AREA))

BATTLE POINT AREA

EAST SHORE SCENIC DRIVE

BONWELL HILL RAMP

BONWELL HILL OVERLOOK (OPERATIONS LAND)

BONWELL HILL RAMP

STATE LEASED LANDS

DAM SHELWAY & TAILWATER AREA



UPDATED MASTER PLAN  
DESIGN MEMORANDUM NO. 15  
BROOKVILLE LAKE, INDIANA

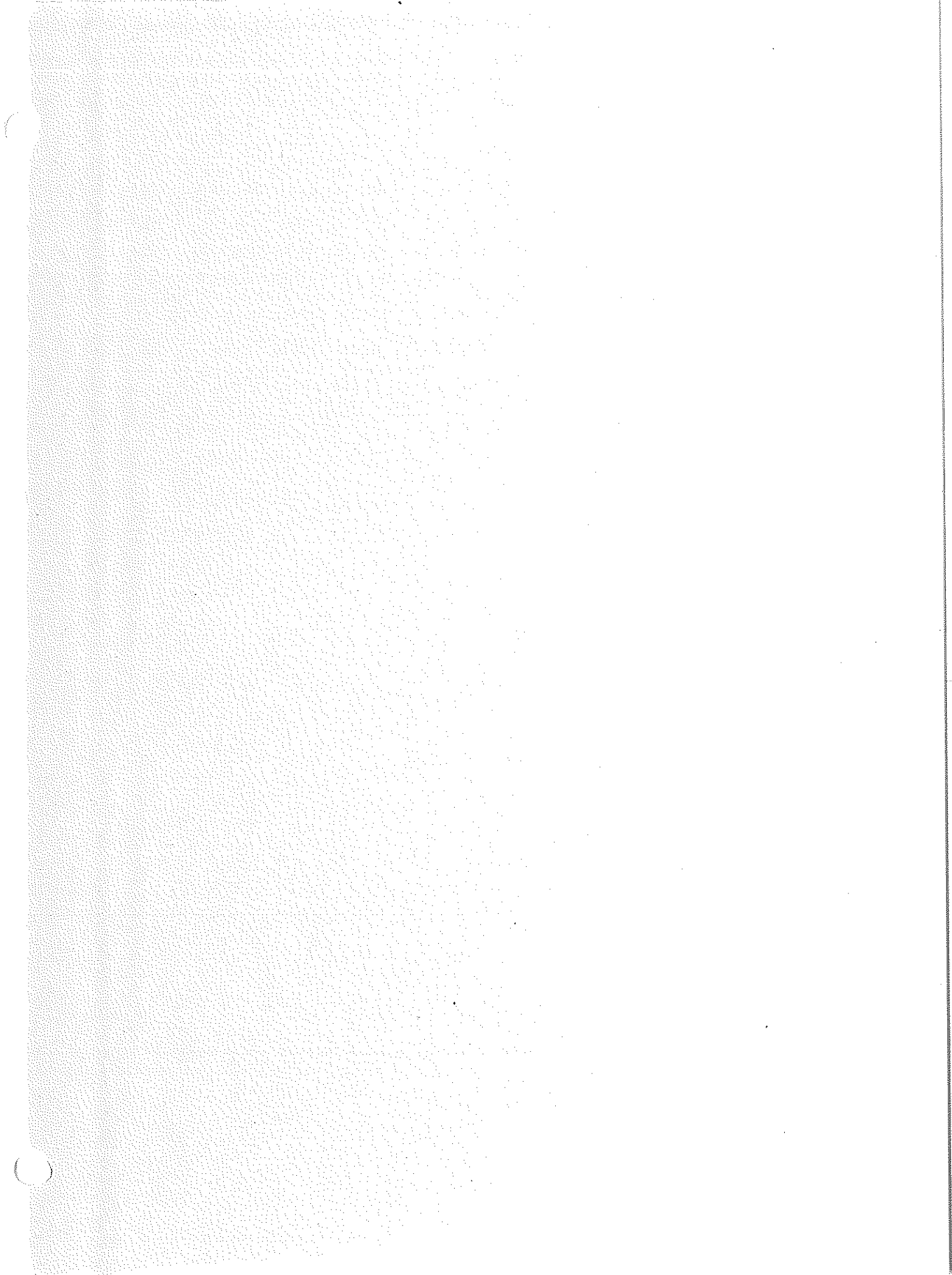
Summary

This study was initiated to evaluate present and future recreation demands at Brookville Lake. The presently approved Design Memorandum No. 13 is no longer valid as a basis for planning facilities at the public use areas at this lake because of the larger than estimated visitation.

In 1977, over 1,600,000 people visited Brookville Lake and it is estimated that by 2030, three million people will use this project. Due to this level of initial use and that estimated to occur by 2030, it is incumbent on the Corps and the State that proper development and management procedures be employed to insure the preservation, conservation, and orderly use of the project resources.

This plan has been coordinated with the Indiana Department of Natural Resources. Their comments are included as Exhibit C. The State of Indiana was granted a lease on 1 January 1974 to use approximately 16,445 acres of land and water areas in the Brookville Lake Project area. All the leased lands are administered by the Department of Natural Resources for recreation and fish and wildlife purposes in accordance with the previously approved Master Plan.

A lease was also granted to the Board of Commissioners, Union County, to use 19.08 acres for public park and recreational purposes. Their purpose was to form a museum related to the Indian and pioneer history of the area. Such a museum was started, but due to financing difficulties was temporarily closed; however, recent efforts have resulted in opening on weekends and holidays or a part-time basis.



DESIGN MEMORANDUM NO. 15  
BROOKVILLE LAKE, INDIANA

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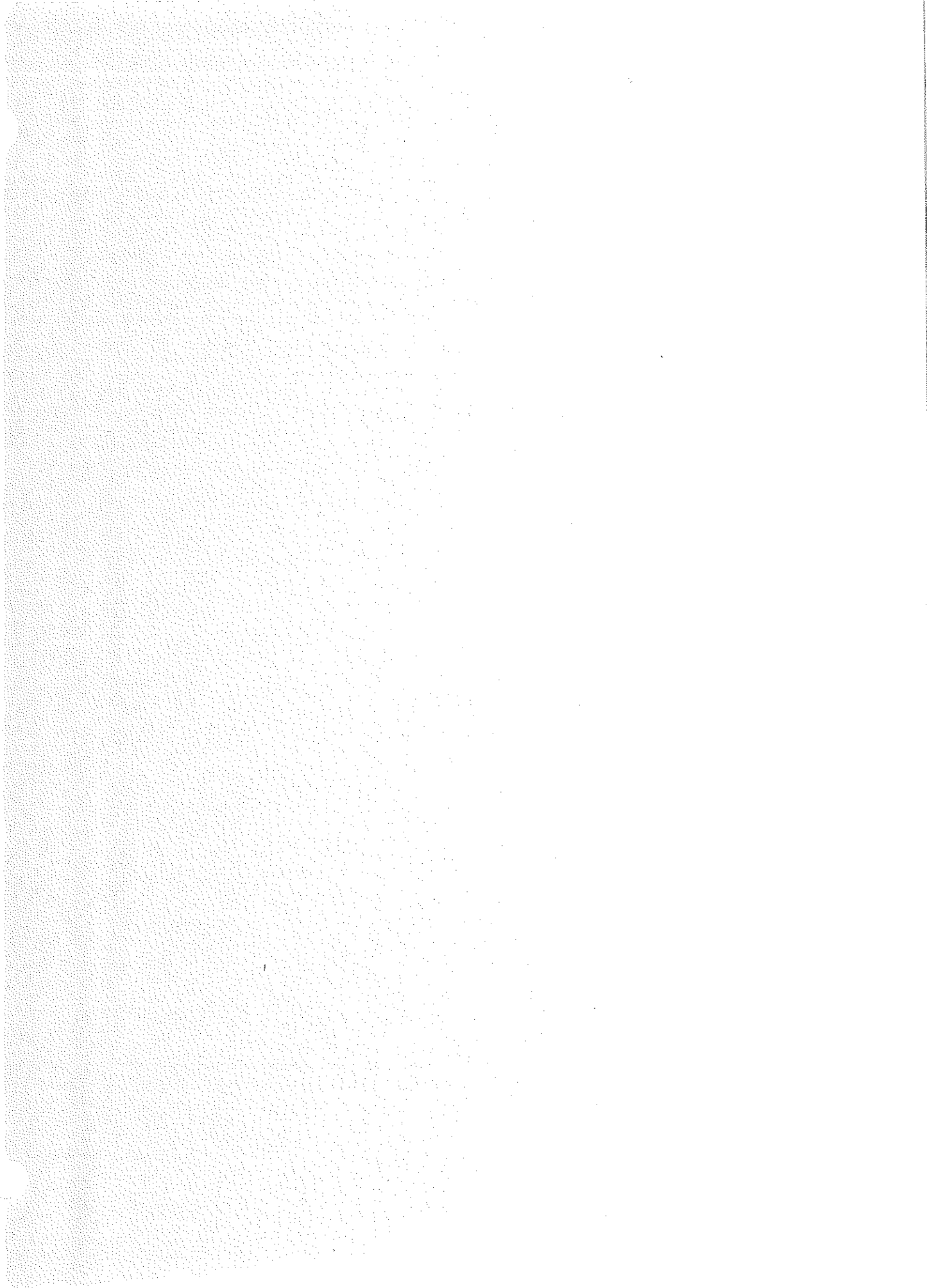
## Exhibits

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Previously Issued Design Memoranda

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1	Reservoir and Spillway Capacities
2	General Design Memorandum
3	Concrete Aggregate and Riprap
4	Dam and Spillway
5	Outlet Works
6	Land Requirements Plan - Public Use
7	Real Estate for Construction Area
8	Relocation of State Highways
9	Real Estate in Town of Fairfield
10	Relocation of County Roads
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12	Real Estate for Segments 1-10 and Indiana Highway 101
12A	Real Estate for Segments 12-30 and Roads
12B	Real Estate for Remaining Fee and Easements
13	Public Use Plan - Site Plan Portion
14	Lake Clearing



SECTION 1  
INTRODUCTION

1-01. Project Authorization. Brookville Lake was authorized as a unit in the general comprehensive flood control plan for the Ohio River Basin adopted by the Flood Control Act approved 28 June 1938, Public Law 761, 75th Congress, 3rd Session. Recreation as a project purpose was included in the formulation studies made in connection with the advanced engineering and design planning efforts in accordance with the provisions of Section 4 of the Flood Control Act approved 24 December 1946 (Public Law 526, 79th Congress, 2nd Session, H.R. 6597) and Senate Document No. 47. Water storage was added as a project purpose at the request of the State of Indiana under the Water Supply Act of 1958.

1-02. Purpose of the Updated Master Plan. Initial visitation at Brookville Lake has demonstrated a greater demand than anticipated in earlier planning for the project. Three factors contribute to this demand - an overall increase in recreation demand, a large unfulfilled demand from urban areas, and the accessibility of Brookville Lake to potential users. This updated Master Plan will provide the basis for development and management of the resource to meet current and future recreation and other use needs. Detailed analyses will be conducted to provide the most feasible plan to accomplish these purposes while insuring a quality recreation experience for visitors.

1-03. Prior Pertinent Design Memoranda. The General Design Memorandum, D.M. No. 2, was used as the basis for detailed planning of the project. Initial site selection and outline of recreation goals was made in D.M. No. 6A, Preliminary Master Plan.

Initial construction was conducted in accord with detailed site planning contained in D.M. No. 13, Public Use Plan, Site Plan Portion.

1-04. Scope of the Updated Master Plan. This plan outlines the overall plan of development of resources at the project. This report sets forth the existing facility development and the plan for management and future facility development to assure that maximum benefits will accrue to the public now and in the future.

1-05. Leasing of Project Lands. Of the 17,012 acres of fee land in the project, 16,464.08 in two leases have been outgranted for operation by others. The remaining approximate 548 acres have been retained for project operations.

a. The State of Indiana, Department of Natural Resources, was granted a 40-year lease on 16,445 acres of land and water for public park and recreational purposes and fish and wildlife management purposes (Exhibit A).



b. The County Commissioners, Union County, Indiana, leased 19.08 acres for public park and recreational purposes for a 10-year period effective 1 January 1973 (Exhibit B). This land was combined with other land to form the Treaty Line Museum.

SECTION 2  
DESCRIPTION OF PROJECT AREA

2-01. Location. Brookville Lake is located in southeastern Indiana on the East Fork of the Whitewater River in Franklin and Union Counties. The Town of Brookville lies 1 mile south of the dam. Immediate access to the project is provided by State Route 101 which parallels the east side of the project and S.R. 44 which crosses the lake near the upper reaches. Regional access is provided by Interstate 74 to the south and Interstate 70 to the north. Two causeways which cross the lake make all parts of the project easily accessible.

2-02. Summarized Project Data.

Pool	Evaluation of Pool	Capacity (acre-feet)	Area (acres)
Minimum	713	55,600	2,250
Water Supply	713-740	89,300	4,510
Seasonal	740-748	39,100	5,260
Flood Control	740-775	214,700	7,790
Total Storage	775	359,600	7,790

2-03. Climate. The climate of the Whitewater basin is temperate continental with warm, humid summers and moderately cold, relatively dry winters. Average annual precipitation for the East Fork Whitewater River basin is 39.35 inches. Snow averages about 19 inches and remains on the ground only a few days at a time. Westerly winds are dominant with tornadoes and extreme winds occasionally occurring in the area.

Storms which produce the more serious floods usually occur from late winter to early spring. These storms usually are of longer duration and cover a greater area than the convective storms which occur during the summer season.

The normal frost-free period is from early May to late October. The summers have some extended spells of hot and sultry weather alternating with more pleasant periods.

2-04. Lake Shoreline, Length and General Character. Brookville Lake lies in a generally north-south direction and extends upstream from the dam approximately 16.4 miles at seasonal pool and a maximum of 20.7 miles at flood pool. The uplands around the lake drop sharply to the deeply entrenched flood plain. The tributaries that enter the lake from the west are relatively small, short streams due to the close proximity

of the West Fork Whitewater River. The largest of these is Wolf Creek. Those tributaries entering from the east are somewhat larger. Progressing upstream they are: Templeton, Spring, Hanna, Silver, and Richland Creeks. These streams drop rapidly to the wide flood plain and there flatten out to make small embayments.

2-05. Project Structures. Brookville Dam is a 3,004-foot long earth fill dam with a maximum height of 181 feet. The spillway is an uncontrolled open cut around the right abutment with crest at elevation 775 feet. The outlet works consist of an operating tower with two 5.25 x 12.0' vertical control gates discharging through a 12-foot diameter circular conduit leading to the stilling basin. In the interest of fish and wildlife conservation and water quality, two 30-inch low-flow bypass pipes have multiple-level inlets to allow regulation of downstream water temperatures.

A maintenance building with office facilities has been constructed on a hill overlooking the east end of the dam. A visitor's pavillion and overlook and comfort station are also located in this area. Recreation connected structures include two beach houses, picnic shelters, washhouses, comfort stations, entrance control stations, and marina offices. Structures connected with water supply and sewage disposal are located where such utilities are available.

Four houses and appurtenant outbuildings located on project lands which were acquired during the initial land acquisition and located on land leased to Indiana are being used by them as residences for park management personnel.

2-06. Lake Operations. Discharges from Brookville Lake are controlled to meet flood control, low flow augmentation, water supply, fish and wildlife and recreation requirements. The project is designed to reduce flooding on the Whitewater River below the dam, the Miami River, and to a lesser extent the Ohio and Mississippi Rivers.

Seasonal pool is maintained from early May until mid-September, thereby enhancing fish and wildlife and recreation activities. Complete details of operations are included in the General Design Memorandum, D.M. No. 2.

2-07. Visitation. Records of visitation have been kept since impoundment in 1974. The first year in which complete recreation facilities were available was 1976. Table 1 shows the annual visitation through 1978.



Table 1

Annual Visitation  
Brookville Lake, Indiana

Year	Visitation (in 1000's)
1974	45.6
1975	1,037.5
1976	1,202.2
1977	1,627.6
1978	1,613.3

It is expected that this project will exhibit a steady growth over its life and reach an ultimate visitation of approximately 3 million annually, provided facilities are developed in a timely manner to assure that the supply is adequate to meet the diverse demands of the public.

SECTION 3  
STATUS OF PROJECT

3-01. General. Funds to initiate preconstruction planning were appropriated in Fiscal Year 1963, and for construction in FY 1965. As of 31 March 1978, engineering studies were 99 percent complete. All 474 tracts of land required for the project have been acquired. Contracts for all road relocations, all utility relocations except Fayette-Union REMC and Public Service Company of Indiana facilities, pool clearing; construction of dam and spillway, construction of roads, ramps, and parking areas; public access buildings, East Shore Scenic Drive, facilities for Mound Beach and Camp Area; and landscaping at recreation sites are complete. Initial construction phase of recreation facilities is 99 percent complete. Project operations were initiated in January 1974 with the impoundment of a permanent pool.

3-02. Recreation Facilities.

a. March 1978 base.

	Estimate	Completed as of Mar '78	Balance to Complete
Lands & Damages	1,065.7	1,065.7	--
Recreation Facilities	7,759.4	6,648.9	1,110.5 for additional facilities at Quakertown Site and Sewer Treatment Fac.
Engineering & Design	869.2	868.1	1.1
Supervision & Admin.	<u>497.0</u>	<u>452.2</u>	<u>44.8</u>
Recreation Facilities (Initial)	10,191.3	9,034.9	1,156.4

b. Code 710 - Current Estimate

Total Recreation Facilities	14,554.0
Engineering & Design	1,574.0
Supervision & Administration	<u>1,646.0</u>
	17,774.0

SECTION 4  
RECREATION AND ENVIRONMENTAL RESOURCES OF THE PROJECT AREA

4-01. History. Although this area was one of the first settled in Indiana, no sites of historic significance are located on project lands. The land was opened for settlement by treaties with the Indians and settlement began in the late 18th Century. The area grew as a prosperous agricultural area as it is yet today.

Historic structures from the project lands were moved to the Treaty Line Museum area before impoundment of the lake and have been incorporated into a pioneer village.

4-02. Archaeology. Archaeologic investigations conducted before impoundment were mainly centered in the Mounds Area. The Indian Mounds had been despoiled by unauthorized collectors and were considered of minor importance. In early 1979, surface investigations were made at several locations on project lands and most especially in the Battle-point Area. Sufficient evidence was found that additional investigations are believed warranted and are planned for the near future.

4-03. Ecology. The project area is in a transition stage from that of a free-flowing stream environment to that of a lake. Changes in the flora and fauna, especially in the valley around the perimeter of the lake, can be observed. Stocking of the lake with game fish and the increase of those species previously present in the stream are already providing a good fishery. Management programs designed to encourage waterfowl are being undertaken. Recreation is causing the greatest impact in other areas of the project. Deterioration of air quality due to vehicular traffic, campfires, and general area development and noise generation are two of the more obvious visitation impacts.

4-04. Environmental and Scenic Qualities. The greatest natural asset of Brookville Lake is its setting. The clear lake is surrounded by gently sloping plains and steeply rising forested slopes. The area surrounding the lake can be roughly divided into three parts - the upland plains, the valley wall, and the flood plain.

The uplands had been cleared of most tree cover and were intensively farmed prior to construction of the lake. Programs of extensive reforestation and of management for small game habitat, including active cropping with some of the crop left as food and cover, are being carried out in this area. The forested valley walls are suited only for light recreational use and as a transitional woodland habitat from uplands to valley bottoms. These walls give way to more gently sloping terraces which drop gradually to the lake.

Tributary streams are formed in the uplands where they have cut breaks in the plains. These streams fall rapidly from the valley walls and then flatten out in the flood plain before entering the lake.

4-05. Recreation at Brookville Lake is water-oriented. Facility development to date has been to provide amenities which will enhance the recreation experience of users. Future development will include some less water-oriented activities, such as trails, court games, playfields and playgrounds, which will supplement the water-related nature of the project.



SECTION 5  
FACTORS INFLUENCING RECREATION

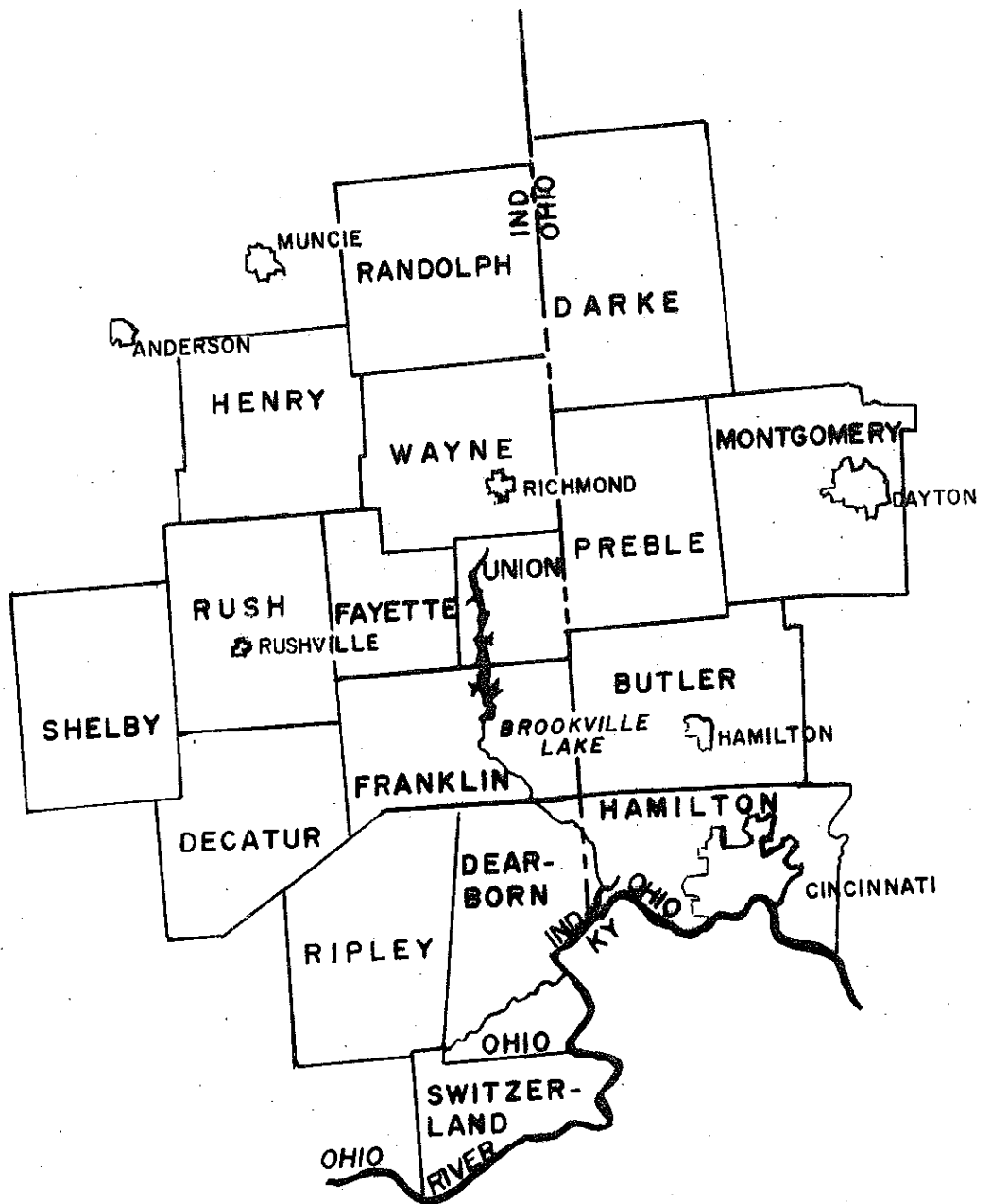
5-01. General. Every effort is being made to obtain the maximum benefits from recreation development. Facilities are being constructed in a manner that will not interfere with project operations and so as to minimize damage to the environment. Wildlife enhancement has been considered as a major goal in the overall development of the project.

5-02. Demography. The area immediately surrounding Brookville Lake is rural in character and the towns within close proximity are agriculturally oriented. A change in the character of land use around the perimeter of the lake is evidenced by the tourist-related businesses which have sprung up along S.R. 101. Not only recreation-type developments, but also permanent homes are being developed in the area.

5-03. Accessibility. Regional access from nearby urban areas is good. Two east-west interstate highways pass near the project area, I-70 on the north and I-74 to the south. I-74, U.S. 52, and U.S. 27 provide access from the Cincinnati area. U.S. 27 is also a connection from I-70 to the project. The principal local access is via S.R. 101 which runs parallel to the east side of the lake. This is a two-lane road which is frequently congested on weekends and holidays by the large number of recreation users. Two causeways, one at Fairfield and the other at Dunlapsville, aid in east-west distribution making all sites accessible from any direction.

5-04. Area of Influence. Nearly all the visitation to Brookville Lake comes from within 60 road miles of the project. This area of influence includes 16 counties in Indiana and eight in Ohio. (See Figure 1.) Urban areas in the zone of influence include Muncie and Richmond in Indiana and Cincinnati and Dayton in Ohio. These urban communities are projected to experience substantial growth in the next decades. Table 2 lists the zone of influence and the estimated current and future populations of the area.

5-05. Related Recreation Areas. Whitewater State Park is located adjacent to the Brookville Lake project. This park has a wide range of recreational activities including camping, picnicking, boating, swimming, hiking, and horse and bicycle rental. The State Park site on the Brookville project lands is being used for current expansion of this park by the construction of roads, a cabin area, picnicking, and a boat launch ramp for access to the lake from the park.



**ZONE OF INFLUENCE  
BROOKVILLE LAKE**

Figure 1

Table 2

Estimated 1977 Population and Projected Population Growth  
Zone of Influence

<u>County</u> <u>Indiana</u>	Distance from <u>Br. Lake</u> (road miles)	<u>1977</u> (1000's)	<u>1985</u> (1000's)	<u>2000</u> (1000's)	<u>2030</u> (1000's)
Franklin	5	17.2	17.5	18.0	19.3
Union	5	6.7	6.8	6.9	7.2
Fayette	14	27.0	27.8	28.7	31.3
Wayne	20	84.1	88.9	96.6	116.5
Dearborn	28	31.8	33.9	38.9	50.4
Rush	28	20.4	20.6	20.8	21.3
Ohio	37	4.4	4.4	4.6	4.9
Decatur	42	23.8	25.2	27.9	32.0
Henry	43	54.7	57.4	62.5	67.6
Randolph	43	29.5	30.2	31.5	33.8
Ripley	44	22.5	24.1	26.7	33.9
Shelby	47	38.9	40.9	45.0	50.0
Hancock	53	38.7	44.1	55.6	80.1
Switzerland	57	6.2	6.2	6.1	5.7
Delaware	60	137.9	148.3	169.0	203.5
Jay	60	24.1	24.6	25.2	25.9
<u>Ohio</u>					
Preble	23	36.9	39.8	44.5	49.0
Butler	26	242.5	267.0	319.5	418.5
Hamilton	32	1,027.6	1,148.7	1,306.6	1,350.0
Clermont	37	107.1	125.3	167.5	262.5
Montgomery	45	716.6	854.6	1,126.6	1,416.6
Warren	47	99.9	124.0	185.1	370.0
Darke	49	54.6	61.5	75.5	104.6
Greene	60	154.7	195.0	281.0	450.5
		3,007.8	3,416.8	4,170.3	5,205.1

The Whitewater Canal State Memorial is located on the West Fork of the Whitewater River. This memorial has been developed as a recreation area.

Table 3 identifies these and other public use sites and parks within the area of influence of Brookville Lake.

Table 3  
Public Use Sites  
Brookville Lake Area

Name	Location	Distance from Brookville Lake (road miles)
Whitewater State Park	Union County, Indiana	Adjacent
Whitewater Canal State Memorial	Franklin County, Indiana	10 miles
Hueston Woods State Park	Preble County, Ohio	14 miles
Martindale State Fishing Area	Wayne County, Indiana	22 miles
East Fork Lake	Clermont County, Ohio	40 miles
Greensburg Res. State Fishing Area	Decatur County, Indiana	42 miles
Versailles State Park	Ripley County, Indiana	45 miles
Stonelick State Park	Clermont County, Ohio	57 miles
Caesar Creek Lake	Warren County, Ohio	58 miles

5-06. Attendance. The 1977 visitation was 1.6 million. Based on the same ratio of attendance to population as is given by this figure, an increase is expected throughout the life of the project as follows:

Table 4

Estimated Visitation

Year	Population in Zone of Influence	Estimated Annual Visitation
1977	3,010,000	1,600,000
1985	3,410,000	1,800,000
2000	4,170,000	2,200,000
2030 (Ultimate)	5,210,000	2,800,000



SECTION 6  
FACILITY NEEDS ANALYSIS

6-01. User Demand. The Activity Design Load (ADL) and Minimum Design Requirements (MDR) for the estimated visitation shown in each year in Table 4 is based on survey data obtained by Operations Division in the summer of 1977. Percent of persons taking part in an activity were based on an average of projects in the same area as Brookville Lake. The ADL and MDR of each activity can be expressed by using the following formulas:

$$ADL = \frac{AV \times Y \times PVA \times P}{N}$$

where:

- Y = Percent of visitation expected to occur during recreation season.
- AV = Annual visitation to project.
- PVA = Percent of weekly visitation expected to occur on a normal weekend day.
- P = Percent of visitation in each activity.
- N = Number of weeks in recreation season - 15.

$$MDR = \frac{ADL}{NPXT}$$

where:

- NP = The number of people per unit, site, or parking space, whichever is applicable.
- T = Turnover for activity.

Activity	% on Weekend (PVA)	% during Rec. Season (Y)	% in Activity (P)	Turnover (T)	No. of People Per Unit (NP)
Boating	.58	.819	.12	3	3
Fishing	.53	.651	.13	3	2.5
Camping	.55	.852	.05	1	4
Picnicking	.40	.846	.08	2	3.5
Swimming	.34	.968	.12	2	4

a. (1) 1977 ADL:  
Boating  
 $\frac{1,600,000 \times .819 \times .58 \times .12}{15} = 6,080 \text{ people}$

Fishing  

$$\frac{1,600,000 \times .651 \times .53 \times .13}{15} = 4,780 \text{ people}$$

Camping  

$$\frac{1,600,000 \times .852 \times .55 \times .05}{15} = 2,500 \text{ people}$$

Picnicking  

$$\frac{1,600,000 \times .846 \times .40 \times .08}{15} = 2,890 \text{ people}$$

Swimming  

$$\frac{1,600,000 \times .968 \times .34 \times .12}{15} = 4,210 \text{ people}$$

(2) 1977 MDR:

Boating  

$$\frac{6,080 \text{ people}}{3 \times 3 \text{ persons c/t space}} = 680 \text{ c/t spaces}$$

Fishing  

$$\frac{4,780 \text{ people}}{3 \times 2.5 \text{ persons c/t space}} = 640 \text{ c/t spaces}$$

Launching  

Boating	680	
Fishing	<u>640</u>	
	1,320 launchings	
	40 launches/ramp/day	= 33 launch lanes

Camping  

$$\frac{2,500 \text{ people}}{1 \times 4 \text{ persons/campsite}} = 625 \text{ campsites}$$

Picnicking  

$$\frac{2,890 \text{ people}}{2 \times 3.5 \text{ persons/picnic site}} = 410 \text{ picnic sites}$$

Swimming Beach  

$$\frac{4,210 \text{ people} \times 100 \text{ sq. ft. per person}}{2} = 210,500 \text{ sq. ft. beach}$$

Parking  

$$\frac{4,210 \text{ people}}{2 \times 4 \text{ people/parking space}} = 530 \text{ parking spaces}$$

(b) (1) 1985 ADL:

Boating  
$$\frac{1,850,000 \times .819 \times .58 \times .12}{15} = 7,030 \text{ people}$$

Fishing  
$$\frac{1,850,000 \times .651 \times .53 \times .13}{15} = 5,530 \text{ people}$$

Camping  
$$\frac{1,850,000 \times .852 \times .55 \times .05}{15} = 2,890 \text{ people}$$

Picnicking  
$$\frac{1,850,000 \times .846 \times .40 \times .08}{15} = 3,340 \text{ people}$$

Swimming  
$$\frac{1,850,000 \times .968 \times .34 \times .12}{15} = 4,870 \text{ people}$$

(2) 1985 MDR:

Boating  
$$\frac{7,030 \text{ people}}{3 \times 3 \text{ persons c/t space}} = 780 \text{ c/t spaces}$$

Fishing  
$$\frac{5,530 \text{ people}}{3 \times 2.5 \text{ persons c/t spaces}} = 740 \text{ c/t spaces}$$

Launching  
Boating 780  
Fishing 740  
$$\frac{1,520 \text{ launchings}}{40 \text{ launches/ramp/day}} = 38 \text{ launch lanes}$$

Camping  
$$\frac{2,890}{1 \times 4 \text{ persons/campsite}} = 720 \text{ campsites}$$

Picnicking  
$$\frac{3,340 \text{ people}}{2 \times 3.5 \text{ persons/picnic site}} = 475 \text{ picnic sites}$$

Swimming  
Beach  
$$\frac{4,870 \text{ people} \times 100 \text{ sq. ft. per person}}{2} = 243,500 \text{ sq. ft. beach}$$

Parking  
 $\frac{4,870 \text{ people}}{2 \times 4 \text{ people/parking space}} = 610 \text{ parking spaces}$

c. (1) 2000 ADL:

Boating  
 $\frac{2,200,000 \times .819 \times .58 \times .12}{15} = 8,360 \text{ people}$

Fishing  
 $\frac{2,200,000 \times .651 \times .53 \times .13}{15} = 6,580 \text{ people}$

Camping  
 $\frac{2,200,000 \times .852 \times .55 \times .05}{15} = 3,440 \text{ people}$

Picnicking  
 $\frac{2,200,000 \times .846 \times .40 \times .08}{15} = 3,970 \text{ people}$

Swimming  
 $\frac{2,200,000 \times .968 \times .34 \times .12}{15} = 5,790 \text{ people}$

(2) 2000 MDR:

Boating  
 $\frac{8,360 \text{ people}}{3 \times 3 \text{ persons c/t space}} = 930 \text{ c/t spaces}$

Fishing  
 $\frac{6,580 \text{ people}}{3 \times 2.5 \text{ persons c/t space}} = 880 \text{ c/t spaces}$

Launching  

Boating	930	
Fishing	880	
	<u>1,810</u>	launching

 $\frac{1,810 \text{ launching}}{40 \text{ launches/ramp/day}} = 45 \text{ launch lanes}$

Camping  
 $\frac{3,440 \text{ people}}{1 \times 4 \text{ persons/campsite}} = 860 \text{ campsites}$

Picnicking  
 $\frac{3,970 \text{ people}}{2 \times 3.5 \text{ persons/picnic site}} = 570 \text{ picnic sites}$

Swimming  
 Beach  

$$\frac{5,790 \text{ people} \times 100 \text{ sq. ft. per person}}{2} = 289,500 \text{ sq. ft. beach}$$

Parking  

$$\frac{5,790 \text{ people}}{2 \times 4 \text{ people/parking spaces}} = 720 \text{ parking spaces}$$

d. (1) 2030 (Ultimate) ADL:

Boating  

$$\frac{2,800,000 \times .819 \times .58 \times .12}{15} = 10,640 \text{ people}$$

Fishing  

$$\frac{2,800,000 \times .651 \times .53 \times .13}{15} = 8,370 \text{ people}$$

Camping  

$$\frac{2,800,000 \times .852 \times .55 \times .05}{15} = 4,370 \text{ people}$$

Picnicking  

$$\frac{2,800,000 \times .846 \times .40 \times .08}{15} = 5,050 \text{ people}$$

Swimming  

$$\frac{2,800,000 \times .968 \times .34 \times .12}{15} = 7,370 \text{ people}$$

(2) 2030 (Ultimate) MDR:

Boating  

$$\frac{10,640 \text{ people}}{3 \times 3 \text{ people c/t space}} = 1,180 \text{ c/t spaces}$$

Fishing  

$$\frac{8,370 \text{ people}}{3 \times 2.5 \text{ persons c/t space}} = 1,120 \text{ c/t spaces}$$

Launching  

Boating	1,180	
Fishing	<u>1,120</u>	
	2,300 launchings	
	$\frac{2,300 \text{ launchings}}{40 \text{ launches/ramp/day}}$	= 58 launch lanes



Camping  
 $\frac{4,370 \text{ people}}{1 \times 4 \text{ persons/campsite}} = 1,090 \text{ campsites}$

Picnicking  
 $\frac{5,050 \text{ people}}{2 \times 3.5 \text{ persons/picnic site}} = 720 \text{ picnic sites}$

Swimming  
 Beach  
 $\frac{7,370 \text{ people} \times 1 \text{-- sq. ft. per person}}{2} = 368,500 \text{ sq. ft. beach}$

Parking  
 $\frac{7,370 \text{ people}}{2 \times 4 \text{ people/parking space}} = 920 \text{ parking spaces}$

6-02. Existing and Required Facilities. Existing facilities were inventoried as a base in establishing whether current needs have been met and where shortages may be expected in the future. A summary of these facilities is shown below and current and expected future needs are shown in Table 5. Existing facilities are:

Car/trailer spaces	1,080
Launch lanes	36
Campsites	469
Picnic sites	125 *
Swimming - beach (sq. ft.)	210,000
Swimming - parking spaces	660 **

\* Most picnic tables are not in designated picnic areas, but are sited at convenient locations where space permits and a need exists. Actual number of tables is approximately 650.

\*\* Parking spaces are also used by picnickers and other day-use visitors.

A summary of required facilities is shown below.

Table 5

## Summary of Required Facilities

Year	C/T Parking	Launch Lanes	Camp Sites	Picnic Sites	Swimming	
					Beach	Car Parking
1977	1,320	33	625	410	210,500	530
1985	1,520	38	720	475	243,600	610
2000	1,810	45	860	570	289,500	720
Ultimate	2,300	58	1,090	720	368,500	920

A comparison of existing and currently required facilities indicates a shortage of car/trailer parking and campsites already exists. By 1985, unless additional facilities are constructed, these shortages will become more acute and shortages will begin to be evidenced in all other facilities.

The desires and interests of the visiting public govern facility needs; therefore, these requirements are subject to variation based on future demand.

SECTION 7  
PLAN OF DEVELOPMENT

7-01. Zoning of Project Lands. (See Plate B) Of the approximate 17,012 acres of project lands, all but the area retained for operations of the dam and outlet works and maintenance of the project and one other small area have been outleased to the State of Indiana. Allocations of project lands are based on the determination of the best management potential of the resources to achieve maximum benefits for the life of the project. Environmental conditions have been considered in the allocations to prevent deleterious effects from misuse of project lands. These allocations are as follows:

a. Project Operations. The Corps has retained approximately 548 acres for project operations of the dam and outlet works and as a maintenance and administration area. Recreation facilities located within the area include the tailwater fishing, dam picnic area, and the Bonwell Hill Overlook and are Corps operated. Public use of the area may be periodically restricted for reasons of public safety and project security. Public safety will be more fully discussed when Appendix E, Project Safety Plan, is next updated.

b. Operations, Recreation-Intensive Use. The approximate 1,930 acres of joint-use land in this category include those areas where intensive use facilities such as marinas and ramps are located and also that land which lies between recreation lands and the seasonal pool. These lands are subject to the same intensive use as specific recreation lands; however, since they lie within the flood pool, use may be curtailed or interrupted by high water.

c. Operations, Recreation-Low Density. Lands in this category are available for trails and other low density recreation and as either wooded or open spaces between noncompatible uses such as intensive recreation and fish and wildlife. About 1,900 acres have been so designated. Management practices in this classification will encourage opportunities for nature study and for the public to become more aware of the environment.

d. Operations, Wildlife Management. The land north of the Dunlapville causeway, except for lands in the Quakertown and Whitewater State Park areas, are managed as a wildlife refuge from 1 October to 30 April. A program of wildlife management and improvement involving planting of food plots and brush control has been initiated. This land of nearly 1,330 acres is available for low-density recreational activity.

e. Operations, Reserve Forest Land. The area on the west side of the lake between the Battlepoint and Quakertown areas is characterized by steep hillsides which limit access to the area. The natural forest cover provides excellent wildlife habitat but is primarily devoted to erosion and vegetation control. This 2,194 acres are available in the wildlife program and also for light density recreation.

f. Recreation Lands. Primary recreation will be on the approximately 3,850 acres of lands specifically acquired for that purpose. This land is available for all types of recreational usage.

7-02. Water Zoning. (Plate C) To minimize conflicts between water skiing, boating, fishing, swimming, and waterfowl refuge, the lake is divided into four main zones as follows:

a. All boats are banned from the wildlife management area above the Dunlapville Causeway from 1 October to 30 April of each season.

b. Idle speed is maintained in the embayments, near the Fairfield Causeway, in the area of the Hanna Creek Ramp to the Dunlapville Causeway, and in the wildlife management area at times when boating is permitted.

c. Unrestricted boating is allowed from an area just above the dam to the idle speed zone in the vicinity of Hanna Creek.

d. All boats are banned from the area near the dam and outlet works as a safety measure.

7-03. Fish and Wildlife Conservation. The Indiana Department of Natural Resources has prepared a comprehensive Wildlife Management Plan.

A survey of primary wildlife species or groups for each of seven primary management units has been made and an evaluation of the alterations needed to achieve the most productive management plan for each unit has been made.

The lake has been stocked with channel catfish, striped bass, muskellunge, walleye, largemouth bass, white bass, black crappie, northern pike, bluegill, redear, rock bass, smallmouth bass, and rainbow trout. A creel census is conducted each spring and fall to determine available species and a fish survey is conducted by fishery biologists to ascertain species available and to guide in future stocking programs.

Management of wildlife is directed toward upland game and waterfowl management. This is primarily concerned with habitat control to insure populations of game species, thus improving hunting. Signs have

been located around the project which specify type of use, i.e., safety zone - no hunting, wildlife refuge - no hunting or trespassing, seasonal refuge - no hunting or trespassing specified dates, waterfowl resting area - hunting by special permit, public hunting area.

The Wildlife Management Plan is reviewed and revised annually by wildlife specialists of the IDNR to keep it current with respect to changes in management techniques, new techniques, changes of area use, and alteration of topography, cover, or wildlife.

The plan is also reviewed by the Corps for adequacy and to insure that it does not conflict with designated project purposes and that no adverse effects will result from its implementation.

7-04. Scenic Resources. The scenic and visual qualities of the lake and project area are the most important natural features. An extensive planting program has been conducted along access roads and in open fields in areas that have been developed. Other areas that are scheduled for later development have been allowed to return to natural vegetation to provide future tree cover and also as a wildlife enhancement feature.

7-05. Existing Recreation Areas. Plate A shows the recreation areas at Brookville Lake. Initial construction considered the provision of necessary facilities in an orderly manner as well as the enhancement of scenic values. Primary development has been for such activities as boating, fishing, swimming, picnicking, and camping. There are nine boat launching ramps having a total of 36 lanes located around the lake, each having car/trailer parking and sanitary facilities. Two of these areas have been developed for both day and overnight use - Mounds and Quakertown. Emphasis has been on providing basic facilities to meet lake visitor needs. Two sites - Battlepoint and Dubois - have no facilities at present and are scheduled for future development. Sites which do not provide lake access include the East Shore Scenic Drive which has a picnic area and an overlook, the Overlook which also has picnicking, and the Dam and Tailwater Area where there is a platform for fisherman use and picnicking.

7-06. Recreation Site Plans. Planning for further development is in two phases - current and future. Current planning considers the present needs and those expected prior to 1985 in order that required facilities will be available to meet the large visitation to this project. Future plans provide for continued orderly development. Following are proposed current and future plans for each site.

a. Dam and Tailwater. (Plate 1.) The dam and tailwater area is in the project operations lands and is Corps' managed. The dam and

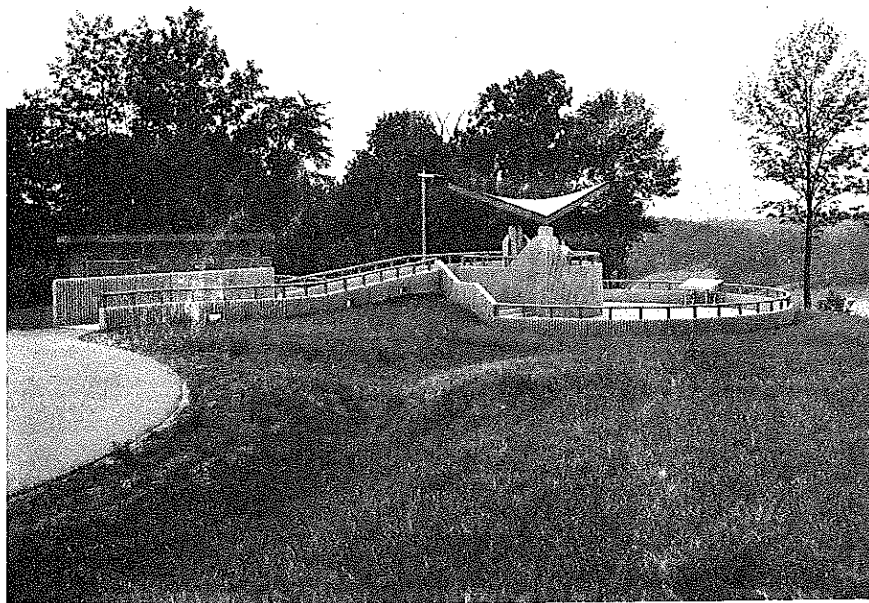
the tailwater have separate access from S.R. 101 which forms the southern boundary of the tailwater area.

(1) Tailwater. A fishing platform is located along the tailwater below the conduit and such appurtenances as parking, picnicking, two shelters, and a comfort station have been developed to enhance fisherman use. Approximately 50 acres are designated as the tailwater area.

(2) Dam. A small picnic area has been located on the west end of the dam. Six picnic units and a shelter are available on this 2-acre tract.

b. Bonwell Hill Overlook. (Plate 2.) The overlook and picnic area is located on 35 acres of Corps-managed land near the Corps shop and office building. Access to this site is from S.R. 101. Facilities include an overlook and visitors' pavillion, comfort station, parking, picnicking, and a small playground.

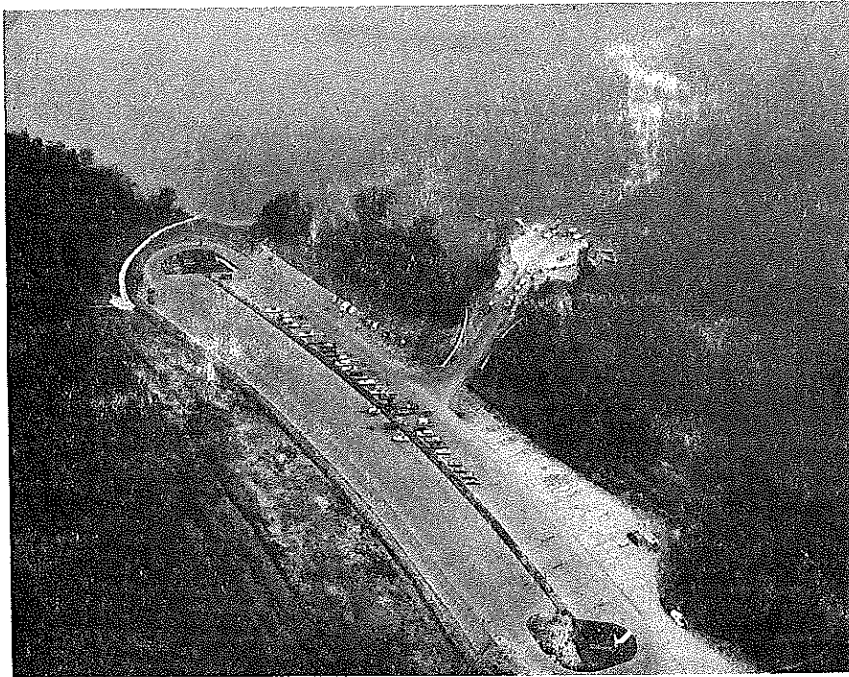
The inclusion of additional interpretive material at the overlook structure is recommended. Such material could include a description of the dam with illustrations, a detailed map of the project area, and possibly some audio material.



Bonwell Hill Overlook. A panoramic view of the dam and lower lake is available from this site.

c. Bonwell Hill Ramp. (Plate 2.) The Bonwell Hill launching ramp is located just inside the State-leased area. This 56-acre site is the first available lake access for visitors coming from the south on S.R. 101 and enjoys heavy usage. Facilities include a seven-lane ramp, parking for 215 car/trailers, two comfort stations, and 20 picnic units.

The parking facilities at this location are frequently overcrowded. Current plans propose construction of additional parking along the north side of the access road to serve as overflow parking. Sufficient space for approximately 50 car/trailers is available.



Bonwell Hill Ramp.

d. East Shore Scenic Drive. (Plates 2, 3, 5, 6, 9, and 10.) This scenic drive winds for approximately 5 miles along the top of the steep banks from a point on S.R. 101 near the Bonwell Hill Ramp to the entrance road for Garr Hill Ramp. Only one overlook and one picnic area (Franklin Point) have been developed to date.

Improvements currently planned include vista clearing and provision of pullovers at five locations to provide sightseers an unrestricted view of the lake. A picnic shelter, chemical toilet, and additional picnic units will be located at Franklin Point to enhance its use.



Future development will include additional picnic areas. Foot trails will be located between the Drive and the lake insofar as possible and adjacent to the Drive where hillside gradients are unsuitable for trails.

e. Battlepoint Area. (Plates 4, 7, and 8.) This 680-acre site is planned for future development. Entrance to this site, which lies on the west side of the lake, will be from Keeler Road. The site takes its name from an ancient earthworks. Further study of this earthworks is planned for the near future and such preservation measures as are warranted will be taken. All facilities except for a small boat camping area will be located on top of the high ridge as the steep slopes make lake access impracticable. Both day-use and overnight facilities will be developed.

(1) Day-use. Approximately 70 acres in the southern portion of this site are designated as a day-use area. Two hundred and twenty-five picnic sites will be located in this area. A foot trail will run around the perimeter and wind down to the lake at one point. Three overlooks will be spaced at suitable sites to present varied views of the lake.

(2) Restaurant Area. A restaurant complex will be located at the 30-acre site that includes the earthworks. No definite plans for this facility have been made at present as scope will depend on future needs of the area.

(3) The northern area of the site (approximately 215 acres) will contain 425 campsites with appurtenant facilities and playfields.

(4) Swimming Pool Complex will be located in the camp area. A change house and parking for 76 cars will be a part of the complex. The pool complex area of 6 acres could be a third-party operation; however, no definite plans are available at this time.

(5) Boat Camping Area. A small flattened area of 15 acres at the northern end of this site is suitable for boat camping. Minimum facilities will be built to provide 45 campsites. A service road will extend from the main camp area to this site; however, due to the steepness of the valley wall, general traffic will not be permitted.

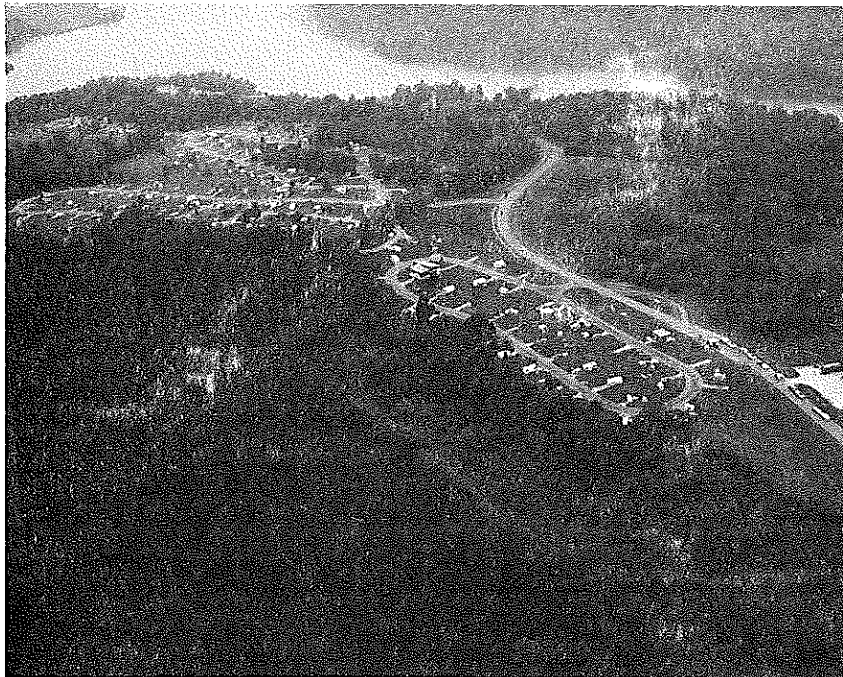
f. Mounds Area. (Plates 9, 10, 11, 14, 15, and 16). Major development emphasis by the State has been at this 2,115-acre tract. Both day-use and overnight facilities are featured in this area. Future plans include a lodge/restaurant complex, cabins, and group camping. The area is roughly divided into two parts by Templeton Creek. Two main access roads serve the area; the West Road serves the area north and west of Templeton Creek including existing day-use areas and beach, and

the South Road extends to existing camp areas and Templeton Creek Ramp. A synopsis of existing and proposed development follows.

(1) Beach. The Mounds beach is located on a 22-acre tract at the end of West Road. A third-party concession located at the beach-house sells food, refreshments, and beach-use items. Parking is available for 464 cars.

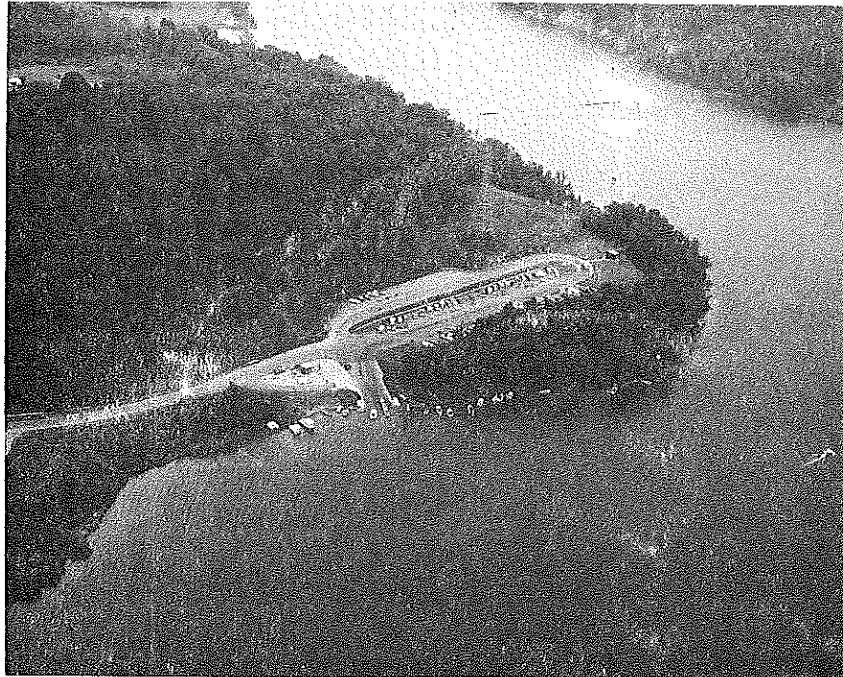
(2) Day-Use Facilities. A picnic shelter and a comfort station are located south of the beach. This area is the only presently designated picnic area at the Mounds Area. Present plans are for extension of the present area south. Another picnic area will be constructed along the South Road near the State's maintenance area.

(3) Camping Areas have been located along the South Road. Three hundred and seventy campsites are located in an area of approximately 220 usable acres. Six washbuildings and three comfort stations are available for camper use. All sites are tent/trailer with electric hookups and water outlets at frequent intervals. A playground is part of the current plans for this area. A camp store which is operated as a third-party concession is located between the two main camping areas.



Initial campsites at Mounds Area.

(4) Boat Ramp (State Designation Templeton Creek Ramp). This two-lane ramp is used as a campers' ramp. Minimum facilities of parking and chemical toilets are provided in this 8-acre area.



Templeton Creek Ramp

(5) Lodge/Restaurant Complex. This complex will be a resort-type facility which is contemplated to be constructed and operated on a long-term concession basis. It is located on a peninsula between the lake and Templeton Creek and contains 85 usable acres. Access to the lake from this site is difficult, so emphasis will be on less water-oriented activities. A needs analysis for this complex will be made prior to any construction.

(6) Cabin Area. The future cabin area lies north of the West Road in the uplands above the beach. No definite plans are available for this 90-acre site as number and location of cabins have not been considered.

(7) Group Camping Area. Group campsites are planned along the South Road near the family camping areas as a future item. Seventy-five acres of usable land have been designated for this purpose. No plans have been formulated at this time as to specific size and layout of areas. This will be considered prior to design of the area.

g. Fairfield Marina (Plate 18) is located on the west side of the lake north of the Fairfield Causeway. It is a State-operated facility with 80 slips and 300 buoys. A marina office, sales building, and parking are located on this 11-acre site. A concession for vending machines to sell bait, cigarettes, snacks, soft drinks, and coffee is operated under a third-party agreement.

h. Fairfield Ramp Area. (Plates 19, 22, and 23) A boat launch ramp has been constructed at this 540-acre site. Day-use facilities are scheduled for future development. Access is via old S.R. 101 from the relocated S.R. 101. An extensive beach area which was formerly planned for this area has been omitted from present plans. Two beaches exist, Mounds and Quakertown, and a third beach is planned at the Dubois Area in the future. It is believed that these will be adequate for foreseeable future needs.

(1) Ramp Area. An eight-lane ramp with appurtenant 230 car/trailer parking and comfort stations is located in this 20-acre area. Parking for 130 more car/trailers will be added as this site is developed in the future.



Fairfield Ramp.

(2) Day-Use. Approximately 285 acres of developable land at this site will be used for picnicking and other day-use activities. Shelters, comfort stations, playfields, playgrounds, trails, and court areas are proposed in this area.

i. Dubois Area. (Plates 27, 28, and 33) This 1,015-acre site is planned for future development. Entrance to the area is from the Roseburgh-Dunlapsville Road via improved county roads. At present, the land is being used in a limited wildlife program. Facilities planned include family and group camp areas, beach, interpretive center and restaurant, and a ramp.

(1) Family Camping will be developed in the southern portion of this site. Approximately 300 acres are developable for this purpose. Four hundred and forty tent/trailer and 100 walk-in sites are planned.

Each tent/trailer site will consist of a paved parking spur, picnic table, trash can, site marker, and electric outlet. Each walk-in site will have tent pad, picnic table, trash can, and site marker. Eight washbuildings and four comfort stations will be provided in this area.

(2) Group Camping will be located at the northern end of the area. About 160 acres of developable land are available. Thirty group sites are planned for this area, with three washbuildings, comfort station, dining and meeting halls, and playfields. No details of the nature of use of this site have been determined as development will be based on needs analysis at such future time as the Dubois area is developed.

(3) Beach. A beach and change house for use of campers will be built on a 30-acre tract. Parking for 100 cars will be provided.

(4) Boat Launching Ramp. A two-lane ramp will be located at the southern tip of the site for use of campers. A chemical toilet and 500-car/trailer parking are planned as part of this 12-acre site.

(5) Interpretive Center and Restaurant. This complex will be located on a 15-acre tract near the family camp area. It is intended to be an activity center for campers.

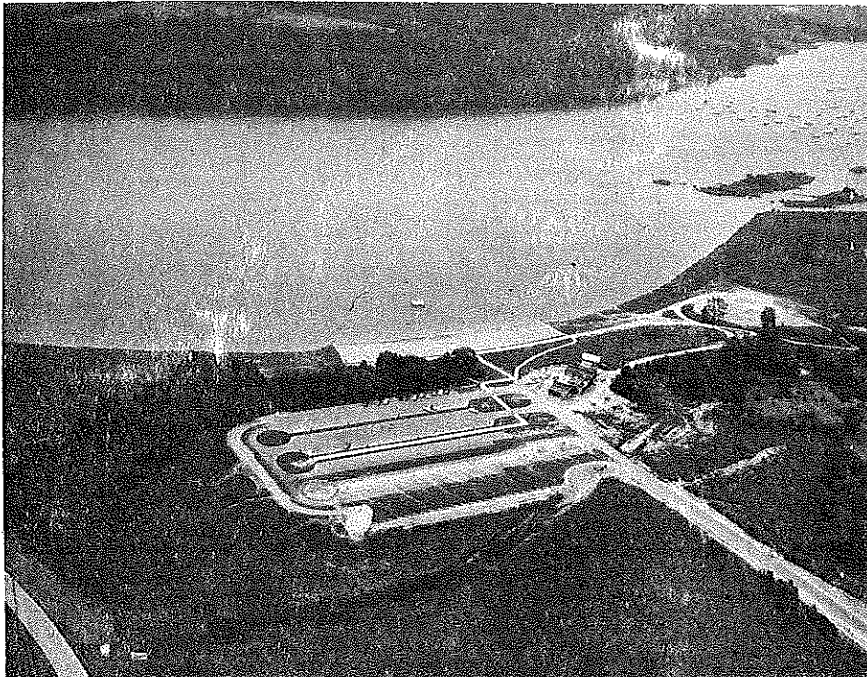
j. Quakertown Area. (Plates 32, 35, 38, and 38A) This area is divided by the Village of Dunlapville and the Dunlapville Road. Extensive development has taken place in this area of 863 acres with the portion north of the road developed for overnight use and the southern for day-use.

(1) Camping. At present, 96 campsites having minimum facilities consisting of water supply and chemical toilets are located in the northern area. One hundred additional camp units are planned in the near future with additional camping to be developed as the need arises in the future. Approximately 144 acres are developable in this area.

(2) Picnic. The larger portion of the land in the southern part of the area has been designated for picnicking and other day-use activities (approximately 190 acres). Picnic units are now located in the area between the beach and the launch ramp with more to be added in the near future. Future plans are for group facilities in the lower end of the site and for family picnicking on top of the ridge just south of th Dunlapville Road.

(3) Beach. A recently constructed beach and change house located in 25 acres near the Dunlapville Road is expected to relieve

some of the overcrowding on the Mounds Beach. The beach is approximately 30,000 square feet. Parking for 200 cars is available.



Quakertown Beach. The recently opened beach has proven very popular with lake visitors.

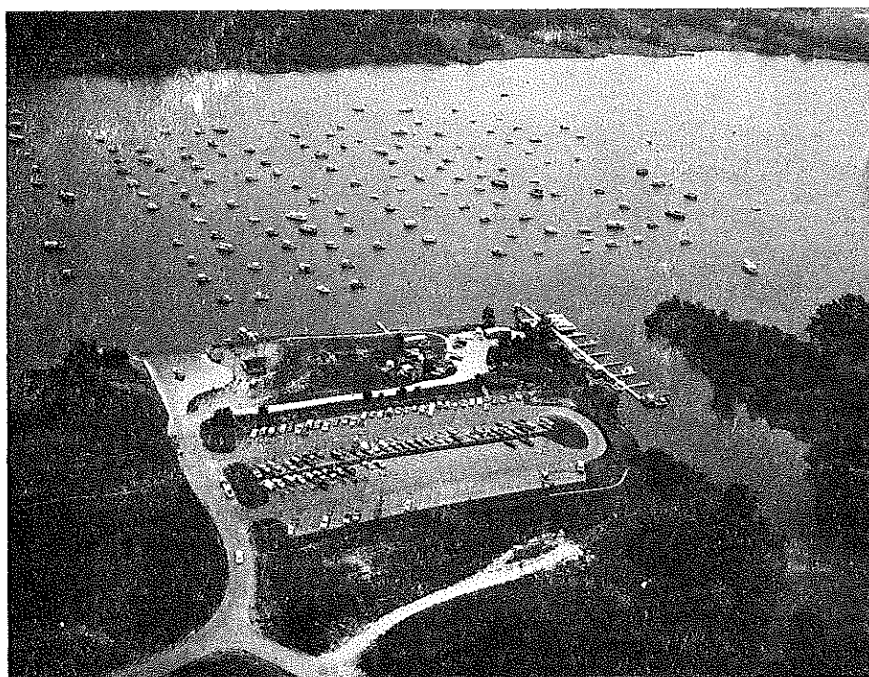
(4) Ramp Area. The seven-lane ramp and parking for car/trailers is located on about 9 acres in the southern part of the area. The parking lot is frequently overcrowded and an additional 104 car/trailer spaces are to be added in the near future.

(5) Marina. A marina south of the ramp and operated under a third-party agreement with the State is located on an area of approximately 4 acres. Facilities include two trailers - one storage and one office, 25-car parking spaces, chemical toilet, 20 boat slips with an



additional 48 slips planned for the future, and a floating sales building. Several boats are available for rental and boater supplies are available. Two hundred and four buoys stretch across the lake.

(6) Small Boat Rental. A small boat concession is located north of the ramp. The concession covers an area of 50 feet around the sales building. Boats, motors, fishing, and picnic supplies are sold at this location.



Quakertown Ramp and Marina Area.

(7) State Service Area. The State is planning a service area located near the campground on approximately 5 acres.

k. Treaty Line Museum. The Board of Commissioners, Union County, was granted a 10-year lease commencing 1 January 1973 to use 19.08 acres of the Quakertown site for public park and recreational

purposes. This area adjoins Dunlapville, a small village that had been allowed to remain in the recreation area. The intention of the Board was to combine this land with 13 acres within the Village of Dunlapville and to form a museum related to the Indian and pioneer history of the area. The museum was developed as an early pioneer village with various exhibits within the buildings. Craft and activity exhibits created a lively atmosphere. Historic structures from the area to be inundated by Brookville Lake were relocated to the museum. An educational program for children was established and the museum was open to the public. It was planned to use the lands leased from the Corps for a pioneer farm and reassemble a large log barn structure.

In 1976, private funding which was the principal financial source was severely curtailed and the museum was closed. Only routine maintenance and repairs were made but museum displays remained intact. Efforts to obtain additional financing have met with some success and recently the museum was reopened on a limited basis on weekends and holidays.

1. State Park Site. (Plates 36, 38, and 38B) This 180-acre site lies between Brookville Lake and Whitewater State Park and is managed by the Department of Parks, Indiana Department of Natural Resources, as part of the Whitewater State Park. Development of the park site was planned as a future item; however, the IDNR requested funds from the Indiana legislature and has plans ready to develop this site by late summer of the year 1979. The main park road is being extended through this site to serve the proposed facilities.

(1) Picnic and Boat Launching Area. A two-lane boat launching ramp and a picnic area with car and car-trailer parking will be located on a 30-acre tract at the southern end of the site. Chemical toilets and a shelter are included in the plans. As needed in the future, additional picnicking will be located on 11 developable acres north of the ramp.

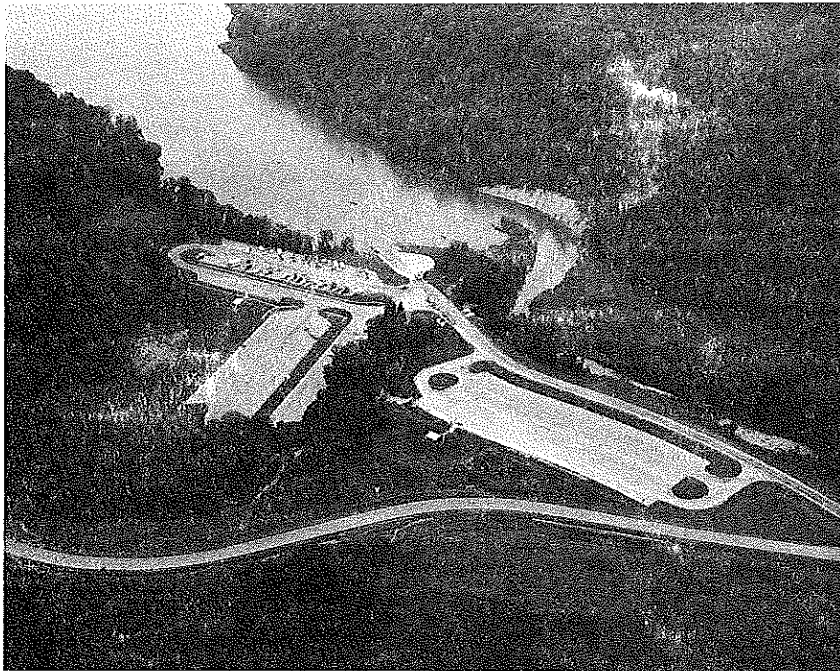
(2) Picnic Area. Picnicking will be developed in the areas west of Hornbeam Nature Preserve partially on Federal land and partially on park land. Roads, parking, and shelters are included in the plan.

(3) Cabin Area. Current plans are for construction of 29 cabins on a 50-acre tract on the north of the State Park site. A play area will be located near the center of the cabin area. Boat moorings will be provided on Brookville Lake for cabin occupants.

(4) Trails. A horse trail will make a circle from the Whitewater Dam along the boundaries of the area down to and along the edge of the lake.

m. Lake Access Sites. Five lake access sites which provide facilities for boat launching are located around the lake. All provide minimum facilities of parking and comfort stations. They are as follows:

(1) Garr Hill Ramp (Plate 10). This three-lane access site of 15 acres is located off S.R. 101 via Garr Hill Road. Only 50 car/trailer parking spaces were initially developed at this site; however, this has been expanded to 250 spaces. Due to the continued popularity of this site, additional parking will be needed in the future. The close proximity of the East Shore Scenic Drive, which has its northern terminus on the entrance road near the ramp, and the topography of the area limit the space available for expansion. A concession boat rental is located at this site. Small boats available for rental are stored near the ramp. Larger boats are stored on private property near the access road entrance. This boat rental is a replacement for the former concession at Templeton Creek Ramp which was terminated since that ramp was open only to campers and also had insufficient parking for the use of renters.



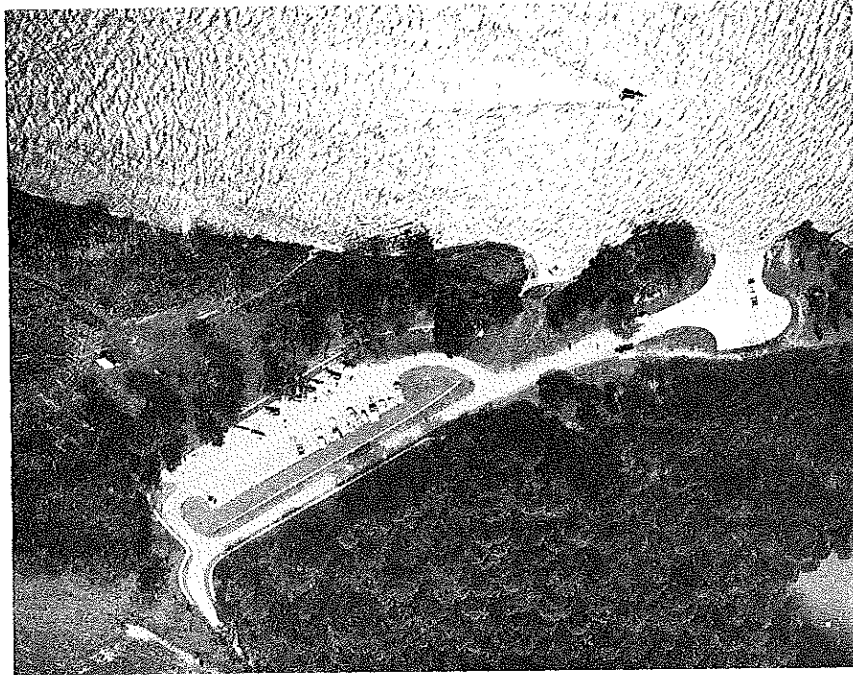
Garr Hill Ramp.

(2) Egypt Hollow Ramp (Plate 22). Since access to the two-lane ramp which lies on the west side of the lake is by a series of county roads which may be reached from several points along S.R. 1, the ramp is used principally by local fishermen. Minimum parking of 20 car/trailer spaces is available.

(3) Hanna Creek Ramp (Plate 28). This 70-acre site was initially developed as a four-lane boat ramp with 54 car/trailer parking spaces. Entrance is presently from S.R. 101 along Bossert Road (Union Co. 600S Road) which has several sharp bends; however, the Indiana State Highway Department is in the process of making a new access road from S.R. 101.

Current plans are for development of a sailboat marina in the Hanna Creek Embayment, which offers good protection from wind and wave

action. A sailboat dock, storage area, manager's office, and sales building will be located east of the ramp. Additional parking and picnic facilities will be constructed to serve both sailboaters and the bank fishermen who have been parking along the access road.



Hanna Creek Boat Ramp.

(4) Dunlapville Ramp (Plate 36). Located off the Roseburgh-Dunlapville Road on the east side of the lake, this two-lane ramp is located just north of the Dunlapville Causeway. The 8-acre area is used mainly by local residents.

(5) Treaty Line Ramp (Plate 38). Minimum facilities are provided at this one-lane ramp located near the upper end of the lake. Access is from S.R. 44 and a county road to this 6-acre site on the west side of the lake. This ramp is closed from 1 October through 14 April as it is located in the Wildlife Management Area and no boating is allowed during that period.

SECTION 8  
DESIGN CRITERIA

8-01. General. Design criteria are in accordance with EM 1110-2-400. A summary of special design considerations is presented herein.

8-02. Potable Water. Water is supplied to the Mounds and Quakertown areas by wells drilled into the Whitewater River bed. This provides water of high quality due to natural filtration and the water is further treated at plants located in the areas. Water supply for the Dam and Tailwater Area, the Overlook, and Bonwell Hill Ramp is obtained from the Franklin County Water District system. None of the other recreation sites have potable water at this time. As these sites are developed, wells and treatment plants will be a part of the development for each site.

8-03. Sanitary Waste Disposal. The Dam and Tailwater Area, Overlook, and Bonwell Hill Ramp are served by the sanitary facilities of the Town of Brookville. The Mounds Area has a sewage treatment plant with a capacity large enough to serve that area. None of the other sites have sewage disposal facilities; however, a regional sewage system is being constructed in the area. When service will become available is indefinite, but as it does, connection will be made to this system. In the interim, chemical toilets are being provided.

8-04. Roads. (Drawing Nos. 110 and 111) Roads are described according to type as follows:

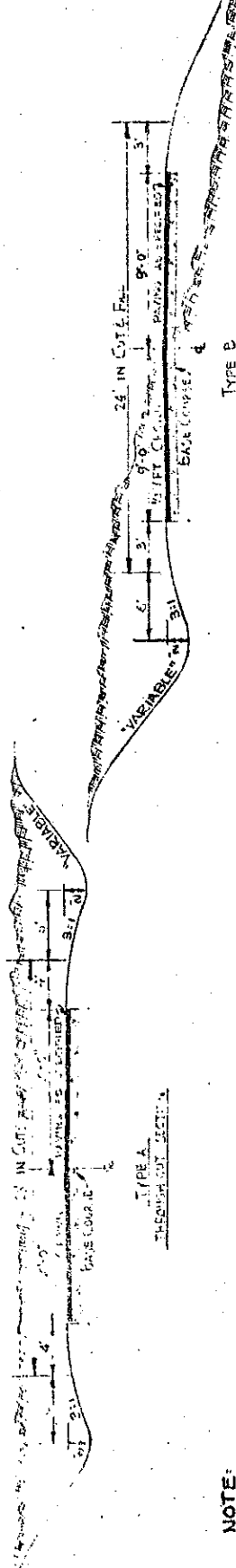
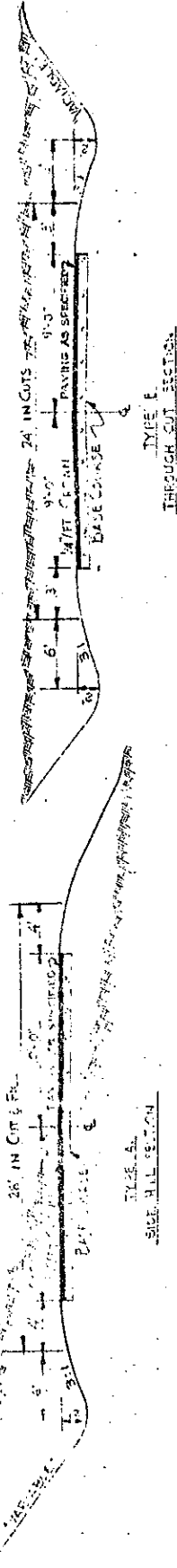
Type A	22/30 Bituminous
Type B	20/28 Bituminous
Type C	18/26 Bituminous
Type D	12/16 Bituminous

Roads will provide ready access in as direct manner as possible and with minimum grade.

8-05. Parking. (Drawing No. 4)

8-06. Picnic Units. There are few areas at Brookville Lake where picnicking is the designated purpose. In such areas, the standard practice is to provide one trash receptacle and one grill for each two tables. Additional picnic areas are presented in the plan of development and will follow standard design criteria. In other locations, tables only are provided and siting is dependent on demand. The total number of tables available at the project at the present time is approximately 650.

8-07. Vista Clearing. (Drawing No. 7)



NOTE:

Roads inside recreational areas follow natural contours as nearly as possible with cuts and fills held to a bare minimum necessary for road shaping and drainage.

'Variable' backslopes should not be steeper than 1 on 2 in earth or 4 on 1 in rock.

Fill slopes subject to rapid drawdown should not be steeper than 1 on 2.5.

Slopes not subject to flooding should not be steeper than 1 on 2.

Seed or Sod to edge of paved surface.

Add additional 2' to shoulders in fill section where guard rail is required.

U.S. ARMY ENGINEER DISTRICT, LOUISVILLE  
 CORPS OF ENGINEERS  
 PARK ROAD SECTIONS  
 (TYPES A, B, C)  
 SOURCE: PARK PRACTICE DESIGN  
 (MODIFIED)  
 REVISIONS: 11/1/57  
 STANDARD: 110

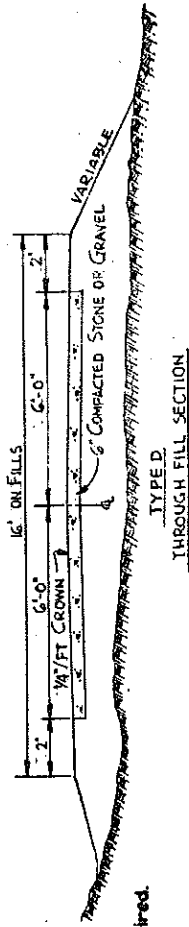


NOTE:

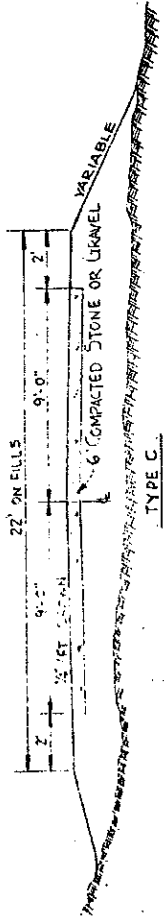
Roads inside recreational areas follow natural contours as nearly as possible with cuts and fills held to a bare minimum necessary for road shaping and drainage.

Seed or Sod to edge of paved surface.

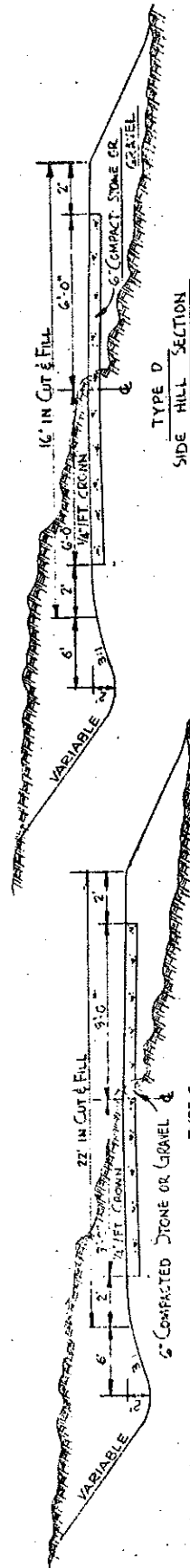
Add additional 2' to shoulders in fill sections where guard rail is required.



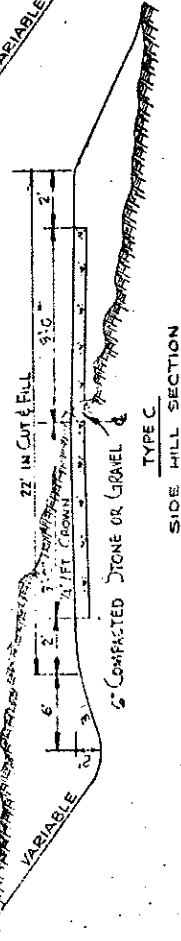
TYPE D  
THROUGH FILL SECTION



TYPE C  
THROUGH FILL SECTION



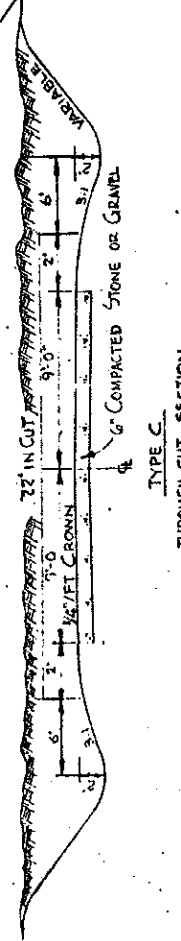
TYPE D  
SIDE HILL SECTION



TYPE C  
SIDE HILL SECTION



TYPE D  
THROUGH CUT SECTION

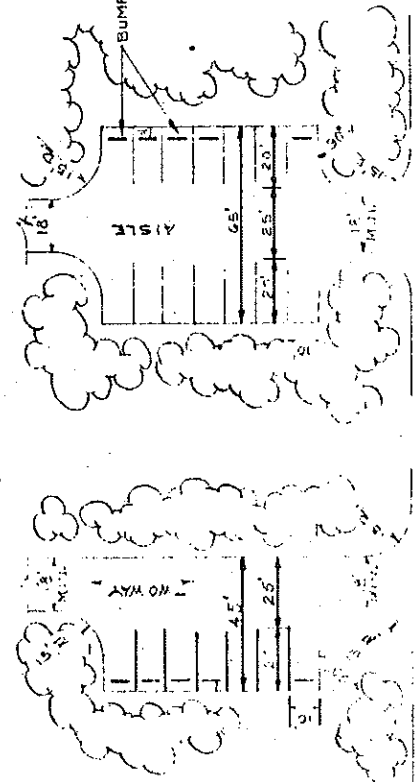


TYPE C  
THROUGH CUT SECTION

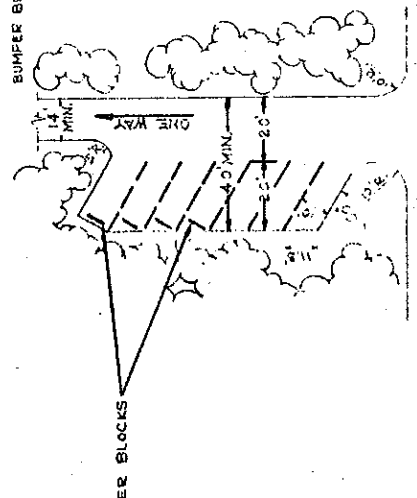
NOTE:  
 "Variable" back-slopes should not be steeper than 1 on 2 in earth or 4 on 1 in rock.  
 Fill slopes subject to rapid drawdown should not be steeper than 1 on 2.5.  
 Slopes not subject to flooding should not be steeper than 1 on 2.

U. S. ARMY ENGINEER DISTRICT, LOUISVILLE  
 COMPS OF ENGINEERS  
 VARIABLE NUMBER

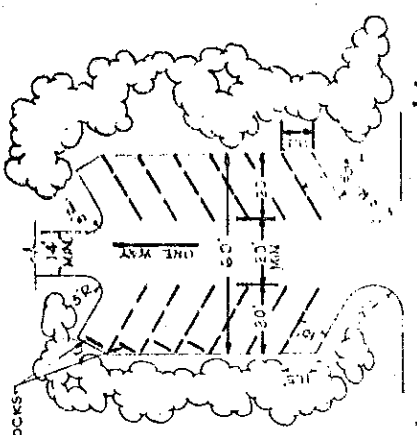
INSTALL OF PARK ROAD SECTIONS  
 (TYPES C & D)  
 SOURCE: PARK RECREATION DESIGN  
 (UNCLASSIFIED)  
 RECREATION FACILITIES  
 STATION PLANS  
 DWG. NO. 111



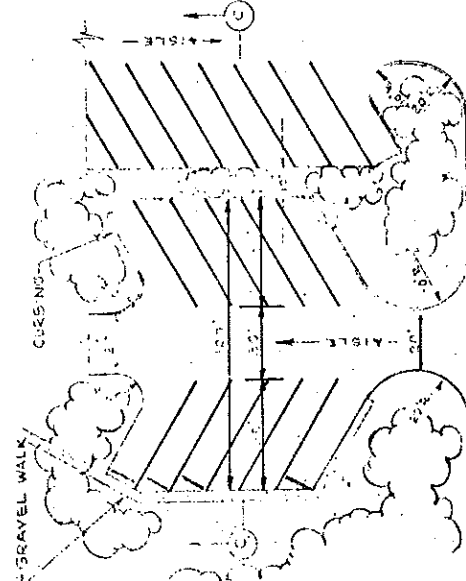
SINGLE BAY TYPE A  
60° ANGLE PARKING



DOUBLE BAY TYPE A  
60° ANGLE PARKING

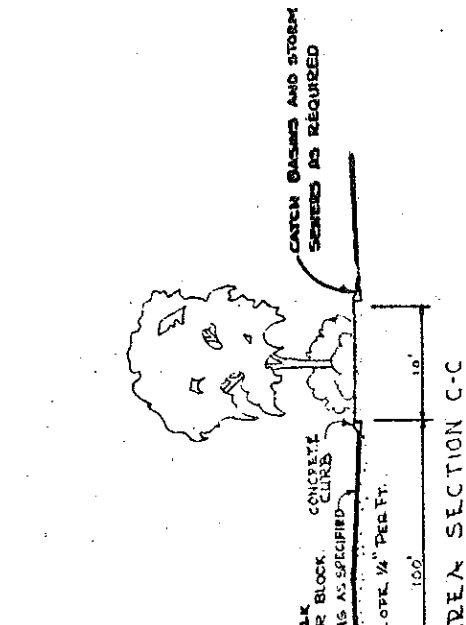


SINGLE BAY TYPE B  
80° ANGLE PARKING



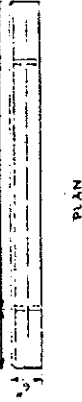
CAR & TRAILER TYPE C  
60° ANGLE PARKING

GROUP PARKING AREAS  
NO SCALE



PARKING AREA SECTION C-C

NOTE: PARKING AREAS ARE TO BE DIMENSIONED TO ACCOMMODATE THE SPECIFIED SPACE REQUIREMENTS ARE TO BE PARTED IN 1/2" INCREMENTS

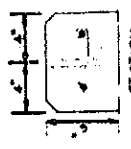


ELEVATION



PLAN

PRECAST CONCRETE BUMPER BLOCKS



SECTION

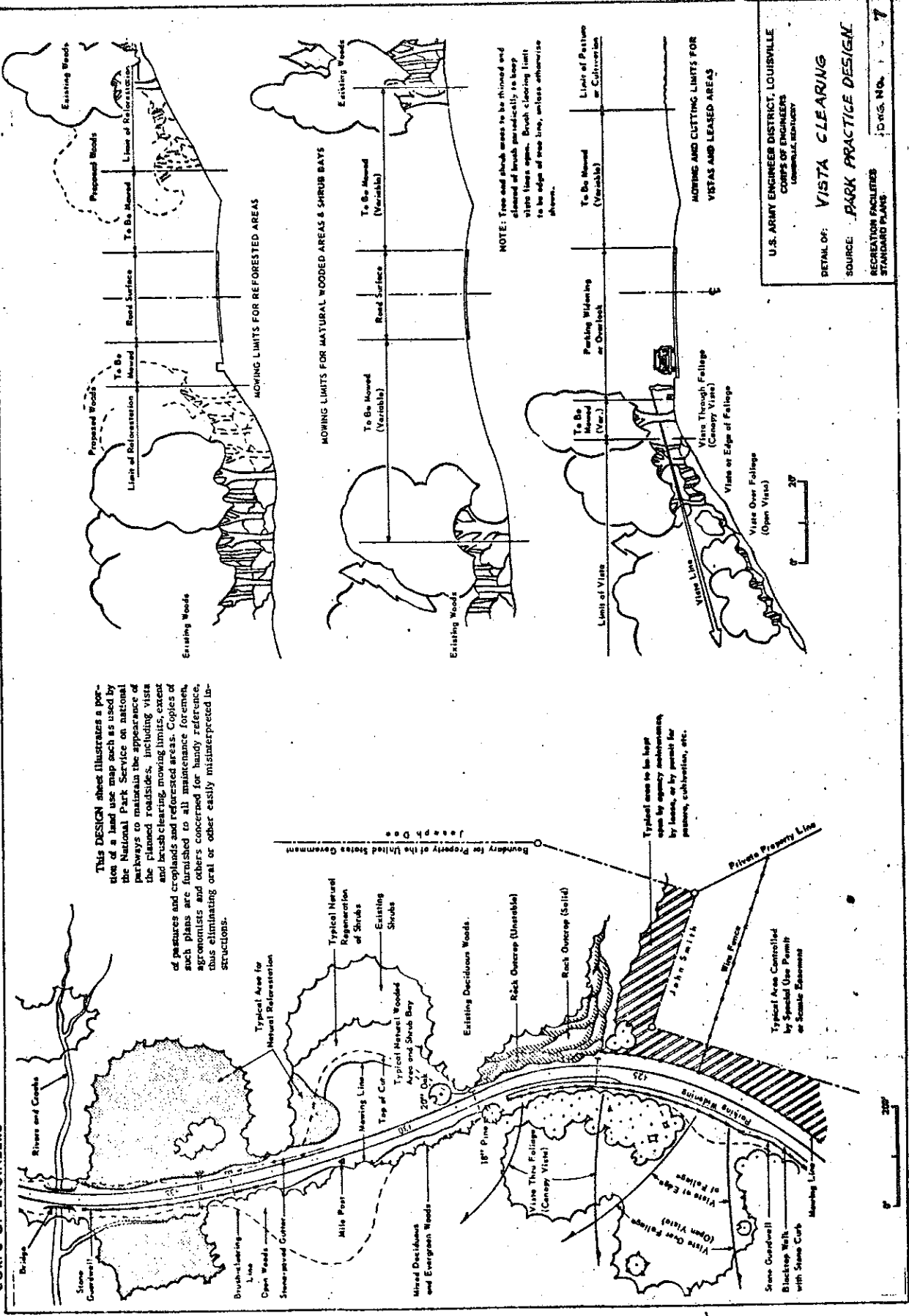
TYPE B

U. S. ARMY ENGINEERING CENTER  
FORT MONMOUTH, N. J.

**PARKING AREAS**  
**SUBJECT: PARK PRACTICE DESIGN (MODIFIED)**

REGISTRATION NO. 100-100-100  
STANDARD DRAWING

FIG. NO. 4



This DESIGN sheet illustrates a portion of a land use map such as used by the National Park Service on national parkways to maintain the appearance of the park roadsides, including vista and brush-clearing mowing limits, extent of pastures and reforested areas. Copies of such plans are furnished to all maintenance foremen, agronomists and others concerned for handy reference, thus eliminating oral or other easily misinterpreted instructions.

U. S. ARMY ENGINEER DISTRICT, LOUISVILLE  
CORPS OF ENGINEERS  
DETAIL OF: **VISTA CLEARING**  
SOURCE: **PARK PRACTICE DESIGN.**  
RECREATION FACILITIES  
STANDARD PLANS  
DWG. NO. **7**

SECTION 9  
COORDINATION WITH OTHER AGENCIES

9-01. Coordination with Federal Agencies. Coordination with concerned Federal agencies was conducted prior to and during construction of this project. Current coordination with these agencies is on an as-needed basis.

9-02. State. The Indiana Department of Natural Resources has leased the project lands, except for those needed for project operations and maintenance, and a small tract leased to Union County, for recreation and fish and wildlife purposes. Informal discussions with personnel of that agency have helped lead to development of the site plans proposed in this Master Plan. The IDNR has reviewed the draft of this Design Memorandum and their comments are inclosed as Exhibit C.

SECTION 10  
ADMINISTRATION AND MAINTENANCE

10-01. Operation and Maintenance of Recreation Facilities. Initial recreation facilities are being developed by the Corps of Engineers. Recreation management, except for two areas, has been granted to the State of Indiana, Department of Natural Resource, by Lease No. DACW-27-1-74-77. This lease grants the State the use and occupancy of 16,445 acres of land and water acres for public park and recreational purposes and fish and wildlife purposes.

Any facilities developed after the start of FY 1980 will be on a 50/50 cost sharing basis in accordance with the provisions of Public Law 89-72. A cost sharing contract under the 710 Recreational Facilities Cost Sharing Fund will be executed prior to that time.

Lease No. DACW27-1-73-128 granted to the Board of County Commissioners, Union County, Indiana, 19.08 acres for public park purposes. This tract of land is adjacent to the Town of Dunlapville and is proposed for use as a part of the Treaty Line Museum.

The 548 acres reserved for Corps' project operations include the Dam and Tailwater Area and the Bonwell Hill Overlook which are Corps managed and maintained.

10-02. Regulations. Brookville Lake is administered in accordance with the provisions of "Title 36" - Chapter III - Part 311 - Federal Code of Regulations. In accordance with the lease, the State will make and enforce such regulations as are necessary and within its legal authority to protect the leased lands from fire, vandalism, and soil erosion. The lease also provides that the State shall manage the area for the protection of fish and wildlife in a manner consistent with State laws, that fish and game laws will be enforced, and that water areas shall be open for public use consistent with State laws for the protection of fish and game.

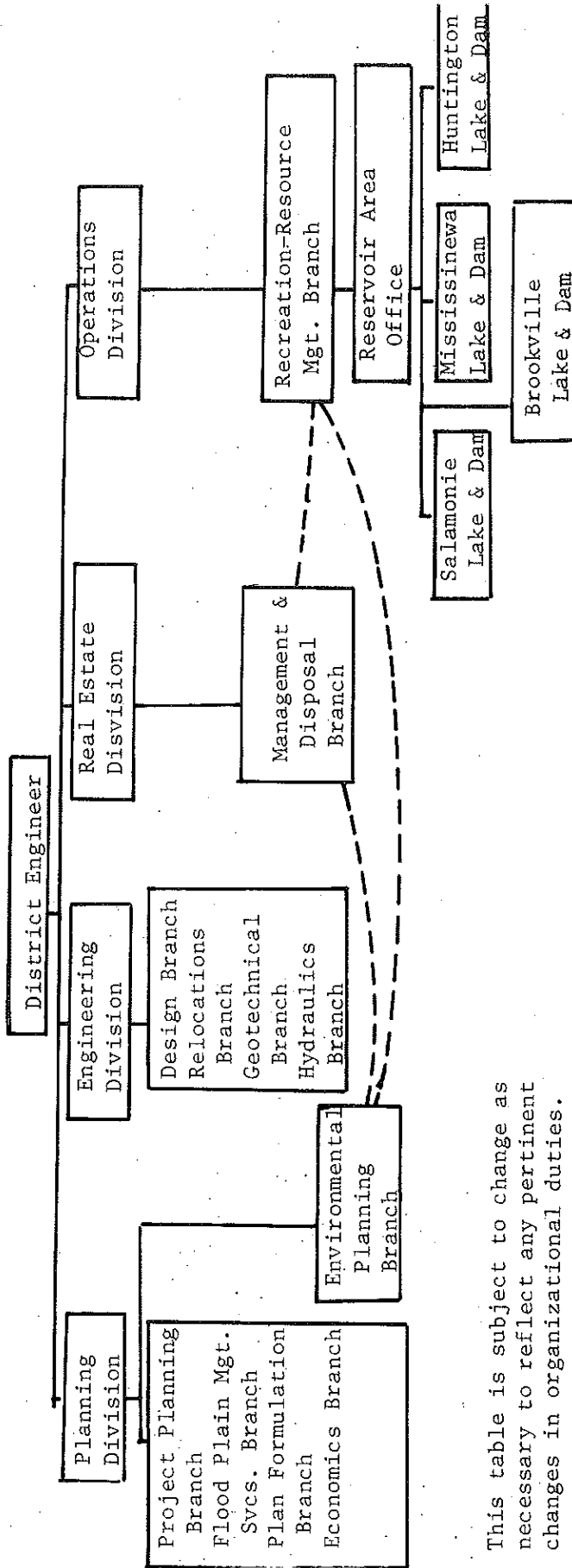
10-03. Staffing and Organization.

a. Corps of Engineers. Figure 2 depicts the organizational arrangement of those elements within the Louisville District, Corps of Engineers, which have administration and management responsibilities in accordance with ER 1130-2-400 and Louisville District Regulation DR 405-2-1. The District Engineer vests appropriate responsibility and authority with the Area Resource Manager for implementation of the District Regulations at the field level.

LOUISVILLE DISTRICT  
CORPS OF ENGINEERS

DISTRICT ORGANIZATION CHART FOR ADMINISTRATION OF

BROOKVILLE LAKE



This table is subject to change as necessary to reflect any pertinent changes in organizational duties.

Figure 2

Staffing at the project level is shown below.

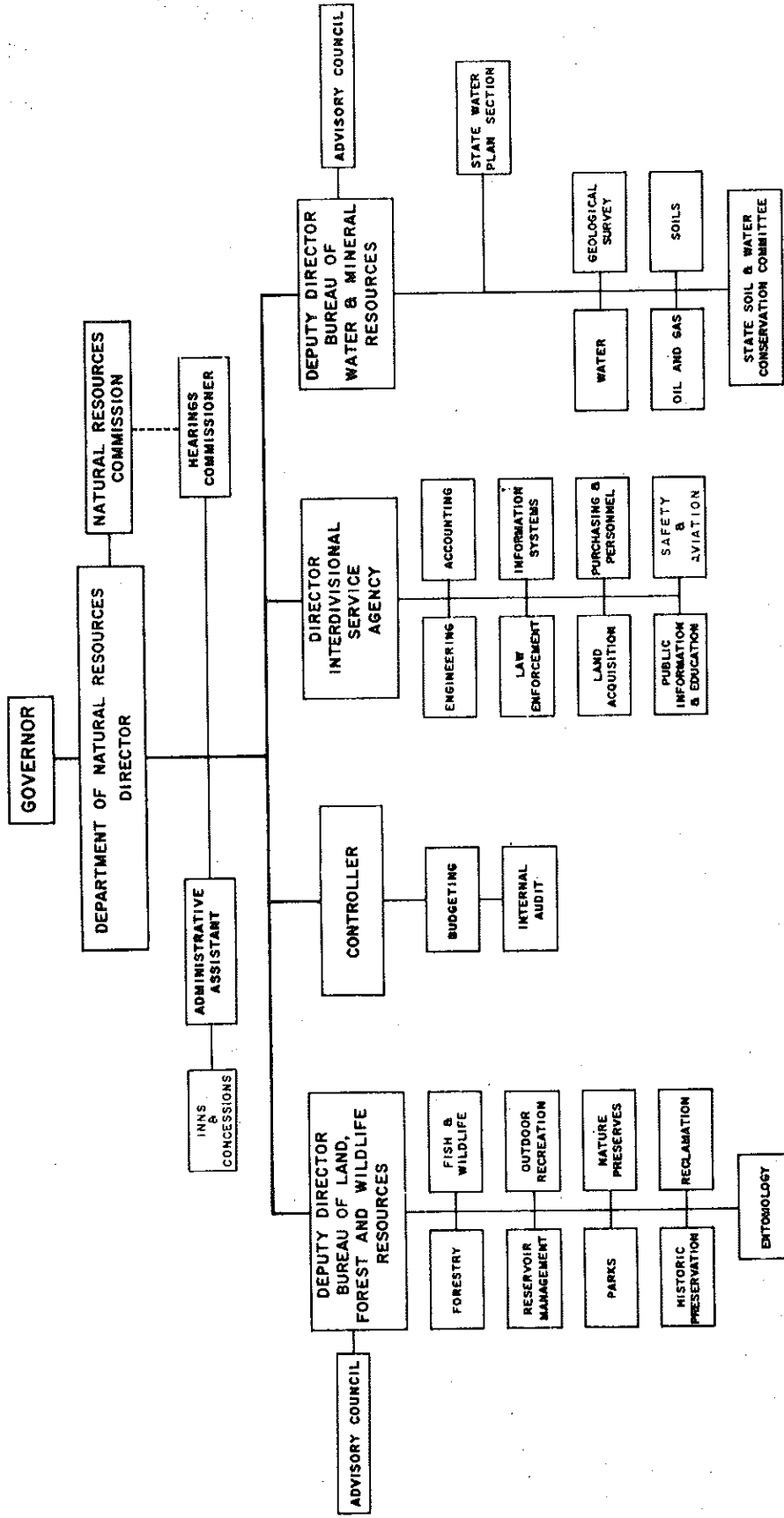
Area Resource Manager	(1/4 time)
Asst. Area Resource Manager	(1/4 time)
Area Clerk	(1/4 time)
Park Ranger	
Maintenance Mechanic	
Maintenance Mechanic Worker	
Maintenance Mechanic Helper	
Temporary Laborers and summer aids	(as needed)

b. State of Indiana. Figures 3 and 4 depict the organization of those elements for the State of Indiana having administrative and management responsibilities. The Department of Natural Resources will have basic responsibility, but will call upon other State departments when needed. Direct management is under a Property Manager.

10-4. User Fees. By the provisions of the lease, the State is permitted to charge user fees. An Annual Entrance Permit, which costs \$10 per year and is honored at all State recreation areas, admits the purchaser and passengers in his vehicle. The daily entrance fee is \$1.25 for a vehicle and passengers and \$0.25 for walk-in admittance. An additional fee of \$1 is charged for all powered recreational units (motorcycles or boats) hauled or towed into the park. The daily fee for camping is based on the type of campsite:

STATE OF INDIANA  
DEPARTMENT OF NATURAL RESOURCES

ORGANIZATION CHART

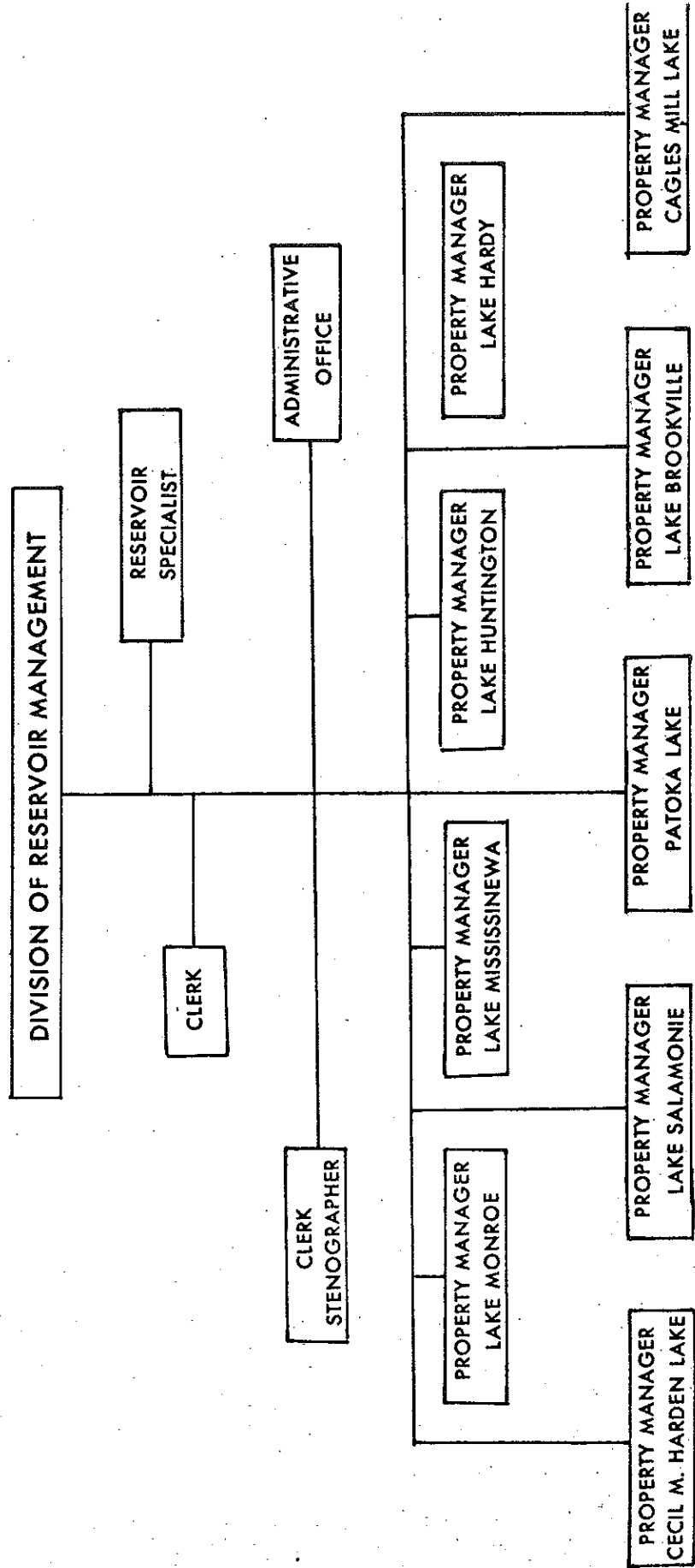


APRIL 1979

Figure 3



STATE OF INDIANA  
 DEPARTMENT OF NATURAL RESOURCES



Class AA	Electricity, access to showers, flush toilets and sewer hook-ups	\$5.00
Class A	Electricity and access to showers and flush toilets	\$4.00
Class B	Access to showers and flush toilets	\$3.00
Class C	Primitive	\$2.00

A daily boat launching fee of \$1 is charged or an annual boat launching permit may be obtained for \$5.

Buoy and dock rates are for the recreation season.

Buoys - Fairfield	\$220.00	5-mo season
- Quakertown	270.00	6-mo season
Open Slips (10 x 18)	\$250.00	w/o electricity
	275.00	w/electricity
Open Slips (14 x 40)	\$500.00	w/electricity

10-05. Fish and Wildlife Resources. The Indiana Department of Natural Resources is managing the fish and wildlife program of the project. As previously discussed, a comprehensive wildlife management plan has been implemented for the whole project. This program includes both fish stocking and game and waterfowl enhancement programs. Fishing and hunting regulations have been promulgated and are enforced.

10-06. Law Enforcement. The primary law enforcement agency is the Indiana Department of Natural Resources. The department's work is supported by each County Sheriff, State Police, and the Park Rangers. Verbal and written warnings are used as much as possible; citations are issued for more serious violations.

10-07. Safety. Safety is a continuous program. All employees, both State and Federal, are urged to report any unsafe conditions and steps are taken immediately to eliminate them. The visiting public is advised of unsafe practices and hazards associated with recreation through signs, markers, barriers, and bulletin boards.

Public education in proper safety precautions is undertaken by public appearances, newspaper articles, and by verbal warnings. Appendix E, Project Safety Plan, to D.M. No. 13 (Master Plan) covers all facets of personnel, facilities, and public safety.

10-08. Concession Activities. By the terms of the lease, concessions are third-party agreements with the State and must be approved by the District Engineer. Concessionaires must conform to all Federal and State regulations and facilities must be compatible with project purposes.

10-09. Visitor Interpretation and Education. Project information is available at the visitors centers at the Overlook and at the State Office Building. Most information is available in the form of maps, brochures, and educational literature.

10-10. Forest Management. Forest lands within the project are managed for recreation and fish and wildlife purposes.

10-11. Fire Protection. The project lands are covered with timber and open grass fields which during dry seasons constitute a major hazard. Project Fire Protection Plan, Appendix C to the Master Plan, is a guide for prevention and suppression of fires. Corps and State personnel have been trained in firefighting and cooperate with each other in protecting the project. Local volunteer fire departments are also available, if needed. Fire prevention is included in the public education program.

SECTION 11  
COST ESTIMATES

Beginning in FY 80, construction of additional facilities will be on a 50-50 cost-sharing basis in the Code 710 Program. The detailed cost estimates show a construction cost of \$1,649,000 for the current planning period (prior to FY 85) and \$19,528,000 for future increments based on July 1979 price levels. In addition, non-Federal, noncost-shared items are estimated at \$1,286,200 and \$7,130,000, respectively. Construction of future facilities will be dependent on future needs over the life of the project.

TABLE 6  
SUMMARY COST ESTIMATE  
BROOKVILLE LAKE, INDIANA

	Cost-Shared		Non-Federal Noncost-Shared	
	Current Cost	Future Cost	Current Cost	Future Cost
Bonwell Hill Ramp	\$ 52,000	\$ 186,000		400,000
East Shore Scenic Drive	70,000	5,590,300		4,000,000
Battlepoint Area		892,000		
Mounds Area	234,625	2,200,400		1,800,000
Fairfield Ramp Area		5,736,000		
Dubois Area	692,350	2,246,150	975,400	
Quakertown Area	314,175	78,000		
State Park Site		52,000		
Garr Hill Ramp			143,000	
Hanna Creek Ramp	70,750			
Subtotal	\$1,433,900	\$16,980,850	\$1,118,400	\$6,200,000
Contingencies, 15%	215,100	2,547,150	167,800	930,000
Total Construction Cost	\$1,649,000	\$19,528,000	\$1,286,200	\$7,130,000
E&D & S&A, 20%	329,800	3,905,600	257,200	1,426,000
Total Cost	\$1,978,800	\$23,433,600	\$1,543,400	\$8,556,000

**TABLE 7**  
**PROJECT COST ESTIMATES**

Bonwell Hill Ramp  
Brookville Lake, Indiana

Unit	Unit Cost	Cost-Shared		Noncost-Shared	
		Units	Cost	Units	Cost
S.Y.	20	2,600	\$52,000		
			7,800		
			\$59,800		
			11,900		
			\$71,700		

Parking, Bituminous  
Contingencies, 15%  
Total Construction Cost  
E&D & S&A, 20%  
Total Cost

**TABLE 8**  
**PROJECT COST ESTIMATES**

East Shore Scenic Drive  
Brookville Lake, Indiana

	Unit	Unit Cost	Cost-Shared		Noncost-Shared	
			Units	Current Cost	Units	Future Cost
Picnic Sites	Each	375	20	\$7,500	40	\$15,000
Picnic Shelter	Each	20,000	1	20,000	1	20,000
Parking, Bituminous	S.Y.	20	1,000	15,000	750	15,000
Parking, Gravel	S.Y.	15				
Comfort Station,	Each	10,000	1	10,000	1	10,000
Chemical	Job	--	--	15,000	26,000	104,000
Vista Clearing	L.F.	4			1	20,000
Foot Trails	Each	20,000				2,000
Overlook	Job	--				\$186,000
Signs				2,500		27,500
Subtotal				\$70,000		\$213,900
Contingencies, 15%				10,500		42,800
Total Construction Cost				\$80,500		\$256,700
E&D & Sta, 20%				16,100		
Total Cost				\$96,600		

LS  
CO

TABLE 9

PROJECT COST ESTIMATES

Battlepoint Area  
Brookville Lake, Indiana

Unit	Unit Cost	Cost-Shared		Noncost-Shared	
		Current	Future	Current	Future
		Units	Cost	Units	Cost
Parking, Bituminous	20		\$264,000		
Road, Type B	55		814,000		
Road, Type C	48		892,800		
Road, Type D	40		120,000		
Picnic Sites	375		84,000		
Camp Sites (Drive-In)	2,000		850,000		
Camp Sites (Walk-In)	1,000		45,000		
Wash Building	80,000	3	240,000		
Comfort Station (Flush)	41,000	11	451,000		
Comfort Station (Chemical)	10,000	2	20,000		
Picnic Shelter w/Comfort Station	55,000	2	110,000		
Picnic Shelter w/o Comfort Station	20,000	4	80,000		
Overlook	20,000	5	100,000		
Entrance Control Sta.	18,000	2	36,000		
Restaurant	--	--			-- \$175,000
Swimming Pool & Bathroom	--	45	9,000		-- 225,000
Boat Tie-Up	200	10,000	40,000		
Trail, Foot	4				
Sewage Collection & Treatment	--	--	950,000		



TABLE 9 (CONT.)

Unit	Unit Cost	Cost-Shared		Noncost-Shared	
		Current Units	Future Units	Current Cost	Future Cost
Sanitary Dump Station	4,500		1		\$4,500
Outdoor Athletic Facil.					25,000
Electrical Dist.					160,000
Water Supply					180,000
Water Tower	100,000				100,000
Signs	--				15,000
Subtotal					\$5,590,300
Contingencies, 15%					838,500
Total Construction					\$6,428,800
E&D & S&A, 20%					1,285,800
Total Cost					\$7,714,600
					\$400,000
					60,000
					\$460,000
					92,000
					\$552,000

TABLE 10  
PROJECT COST ESTIMATES

Mounds Area  
Brookville Lake, Indiana

	Unit	Unit Cost	Cost-Shared		Noncost-Shared	
			Current Units	Future Units	Current Cost	Future Cost
Parking, Bituminous	S.Y.	20	3,000			
Picnic Sites	Each	375	75			
Children's Playground	Each	3,500	1			
Outdoor Athletic Facilities	Job					
Cabins	Each	20,000				
Group Campsites	Each	8,000		20	160,000	
Washbuilding	Each	80,000		2	160,000	
Comfort Station, Flush	Each	41,000	1	1	41,000	75
Lodge/Restaurant Complex	Job	--				2,500,000
Assembly Bldg - Group	Job	--				
Camp	Job	--				
Sewage Disposal	Job	--				
Water Supply	Job	--				
Electrical Dist.	Job	--				
Subtotal						
Contingencies, 15%					\$892,000	\$4,000,000
Total Construction Cost					133,800	600,000
E&D & EA, 20%					\$1,025,800	\$4,600,000
Total Cost					205,200	920,000
					\$1,231,000	\$5,520,000



TABLE 12  
PROJECT COST ESTIMATES

Dubois Area  
Brookville Lake, Indiana

Unit	Unit Cost	Cost-Shared		Noncost-Shared	
		Current Units	Future Cost	Current Units	Future Cost
Launch Ramp	18,000				
Road, Class A	60	9,060			
Road, Class B	55	17,400			
Road, Class C	48	15,300			
Parking, Bituminous	20	11,700			
Campsites, Drive-In	2,000	440			
Campsites, Walk-In	1,000	100			
Campsites, Group	8,000	30			
Comfort Station, Flush	41,000	10			
Comfort Station, Chemical	10,000	1			
Wash Building	80,000	6			
Beach, Grade & Sand	--				
Change House	--				
Interpretive Center	--				
Theater-Restaurant					
Complex					
Dining & Meeting Hall					
Dining Hall					
Outdoor Athletic Facil.					
Trail, Foot	4	58,000			
Entrance Control Sta.	18,000	1			
Sanitary Dump Station	4,500	2			
Sewage Disposal					
Water Supply					
Electrical Dist					
Signs					
					\$1,800,000

TABLE 12 (CONT.)

Unit	Unit Cost	Cost-Shared		Noncost-Shared	
		Current Units	Cost	Current Units	Cost
Subtotal					
Contingencies, 15%			\$5,736,000		\$1,800,000
Total Construction Cost			860,400		270,000
E&D & S&A, 20%			\$6,596,400		\$2,070,000
Total Cost			1,319,300		414,000
			\$7,915,700		\$2,484,000

TABLE 13  
PROJECT COST ESTIMATES

Quakertown Area  
Brookville Lake, Indiana

	Unit	Unit Cost	Cost-Shared		Noncost-Shared	
			Units	Cost	Units	Cost
Parking	S.Y.	20	5,800	\$116,000	2,300	\$46,000
Roads, Class C	L.F.	48	4,200	201,600	15,300	734,400
Picnic Sites	Each	375	30	11,250	150	56,250
Campsites	Each	2,000	100	200,000	100	200,000
Comfort Station Chemical	Each	10,000	6	60,000		
Comfort Station, Flush	Each	41,000			5	205,000
Wash Building	Each	80,000			6	480,000
Picnic Shelter	Each	20,000	1	20,000	4	80,000
Service Area	Job	--			--	10,000
Group Picnic Sites	Each	1,750			10	17,500
Overlook	Each	20,000			1	20,000
Children's Playground	Each	3,500			2	7,000
Water Supply	Job			3,500		45,000
Electrical Dist.	Job			45,000		40,000
Sewage Disposal	Job			30,000		300,000
Signs	Job			--		5,000
Subtotal				5,000		\$2,246,150
Contingencies, 15%				\$692,350		336,950
Total Construction Cost				103,900		\$2,583,100
E&D & S&A, 20%				\$796,250		516,600
Total Cost				159,250		\$3,099,700



TABLE 15  
PROJECT COST ESTIMATES

Garr Hill Ramp  
Brookville Lake, Indiana

Unit	Unit Cost	Cost-Shared			Noncost-Shared			
		Current Units	Current Cost	Future Units	Future Cost	Current Units	Current Cost	Future Cost
S. Y.	20			2,600	\$52,000			
Parking, Bituminous					7,800			
Contingencies, 15%					\$59,800			
Total Construction Cost					11,900			
E&D & S&A, 20%					\$71,700			
Total Cost								



TABLE 16  
PROJECT COST ESTIMATES

Hanna Creek Boat Ramp  
Brookville Lake, Indiana

Unit	Unit Cost	Cost-Shared		Noncost-Shared	
		Units	Cost	Units	Cost
Sailboat Harbor					
Parking	20	2,600	\$52,000		
Picnic Sites	375	10	3,750		
Comfort Station, Chemical	10,000	1	10,000		
Sail Boat Dock					
Electrical Dist.			5,000		
Subtotal			\$70,750		\$125,000
Contingencies, 15%			10,600		3,000
Total Construction Cost			\$81,350		\$143,000
E&D & S&A, 20%			16,250		21,500
Total Cost			\$97,600		\$164,500
					32,900
					\$197,400

SECTION 12  
RECOMMENDATIONS

12-01. Recommendations. It is recommended that this Design Memorandum be approved and that it replace currently approved Design Memorandum 13 as the basis for development and implementation of management procedures for both present and proposed recreational facilities contained herein.

EXHIBIT A

DEPARTMENT OF THE ARMY

LEASE

No. DACW-27-1-74-77

FOR PUBLIC PARK AND RECREATIONAL PURPOSES  
AND FOR FISH AND WILDLIFE MANAGEMENT PURPOSES  
BROOKVILLE LAKE

PROJECT AREA

THE SECRETARY OF THE ARMY under authority of Section 4 of the Act of Congress approved 22 December 1944, as amended (16 U.S.C. 460d), hereby grants to State of Indiana, Department of Natural Resources,

a lease for a period of forty (40) years commencing on 1 January 1974, and ending on 31 December 2013 to use and occupy approximately 16,445.0 acres of land and water areas under the primary jurisdiction of the Department of the Army in the Brookville Lake Project Area, hereinafter referred to as the premises as shown on attached Exhibit "A", Reservoir Area Map, numbered Plate A, dated revised Oct 1973 for public park and recreational purposes and fish and wildlife management purposes.

THIS LEASE is granted subject to the following conditions:

1. The lessee shall conform to such regulations as the Secretary of the Army may issue to govern the public use of the project area, and shall comply with the provisions of the above cited Act of Congress. The lessee shall protect the premises from fire, vandalism, and soil erosion, and may make and enforce such regulations as are necessary, and within its legal authority, in exercising the privileges granted in this lease, provided that such regulations are not inconsistent with those issued by the Secretary of the Army or with provisions of the above cited Act of Congress.

2. The lessee shall administer and maintain the premises in accordance with the U.S. Army Engineers' Master Plan and the implementing General Development Plan for the premises and with an Annual Management Program to be mutually agreed upon between the lessee and the U.S. Army District Engineer in charge of the administration of the project, which may be amended from time to time as may be necessary. Such Annual Management Program shall include, but is not limited to, the following:

- a. Plans for management activities to be undertaken by the lessee or jointly by the U.S. Army Engineers and the lessee, including improvements and other facilities to be constructed thereon.
- b. Budget of the lessee for carrying out the management activities.
- c. Personnel to be used in the management of the area.

3. The lessee shall provide the facilities and services necessary to meet the public demand either directly or through concession agreements with third parties. All such agreements shall state that they are granted subject to the provisions of this lease and that the concession agreement will not be effective until approved by the District Engineer.

4. Admission, entrance or user fees may be charged by the lessee for the entrance to or use of the premises or any facilities constructed thereon, PROVIDED, prior written approval of the District Engineer is obtained.

EXHIBIT A

5. The amount of any fees and all rates and prices charged by the lessee or its concessionaires for accommodations, food (except packaged goods), and services furnished or sold to the public shall be subject to the prior approval of the District Engineer. The lessee shall, by 15 April and 15 October of each year, submit to the District Engineer for approval a list of the fees, rates and prices proposed for the following 6 months, including justification for any proposed increase or decrease. The District Engineer will give written notice to the lessee of his approval of or objection to any proposed fee, rate or price and will, if appropriate, state an approved fee, rate or price for each item to which an objection has been made. The lessee and/or its concessionaires shall keep a schedule of such fees, rates or prices posted at all times in a conspicuous place on the leased premises.

6. All monies received by the lessee from operations conducted on the premises, including, but not limited to, entrance and admission fees and user fees and rental or other consideration received from its concessionaires, may be utilized by the lessee for the administration, maintenance, operation and development of the premises. Any such monies not so utilized, or programmed for utilization within a reasonable time, shall be paid to the District Engineer at the end of each 5-year period. The lessee shall establish and maintain adequate records and accounts and render annual statements of receipts and expenditures to the District Engineer, except for annual or weekly entrance fees which also are honored at other recreational areas operated by the lessee. The District Engineer shall have the right to perform audits of the lessee's records and accounts, and to require the lessee to audit the records and accounts of third party concessionaires, and furnish the District Engineer a copy of the results of such an audit.

7. All structures shall be constructed and landscaping accomplished in accordance with plans approved by the District Engineer. Further, the lessee shall not discharge waste or effluent from the premises in such a manner that such discharge will contaminate streams or other bodies of water or otherwise become a public nuisance.

8. The right is reserved to the United States, its officers, agents, and employees, to enter upon the premises at any time and for any purpose necessary or convenient in connection with river and harbor and flood control work, and to remove timber or other material required for such work, to flood the premises when necessary, and/or to make any other use of the land as may be necessary in connection with public navigation and flood control, and the lessee shall have no claim for damages of any character on account thereof against the United States or any agent, officer or employee thereof.

9. Any property of the United States damaged or destroyed by the lessee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the lessee to the satisfaction of the District Engineer.

10. The United States shall not be responsible for damages to property or injuries to persons which may arise from or be incident to the exercise of the privileges herein granted, or for damages to the property of the lessee, or for damages to the property or injuries to the person of the lessee's officers, agents, servants, or employees or others who may be on the premises at their invitation or the invitation of any one of them, arising from or incident to the flooding of the premises by the Government or flooding from any other cause, or arising from or incident to any other governmental activities, and the lessee shall hold the United States harmless from any and all such claims.

11. That at the time of the commencement of this lease, the lessee will obtain from a reputable insurance company, acceptable to the Government, liability or indemnity insurance providing for minimum limits of \$\_\_\_\_\_ per person in any one claim, and an aggregate limit of \$\_\_\_\_\_ for any number of persons or claims arising from any one incident with respect to bodily injuries or death resulting therefrom, and \$\_\_\_\_\_ for damage to property suffered or alleged to have been suffered by any person or persons resulting from the operations of the lessee under the terms of this lease.

12. This lease may be relinquished by the lessee at any time by giving to the Secretary of the Army, through the District Engineer, at least 30 days' notice in writing.

13. This lease may be revoked by the Secretary of the Army in the event the lessee violates any of the terms and conditions of this lease and continues and persists therein for a period of 30 days after notice thereof in writing by the District Engineer.

14. On or before the date of expiration of this lease or its relinquishment by the lessee, the lessee shall vacate the premises, remove its property therefrom, and restore the premises to a condition satisfactory to the District Engineer. If, however, this lease is revoked, the lessee shall vacate the premises, remove its property therefrom, and restore the premises as aforesaid within such time as the Secretary of the Army may designate. In either event, if the lessee shall fail or neglect to remove its property and so restore the premises, then its property shall become the property of the United States without compensation therefor, and no claim for damages against the United States or its officers or agents shall be created by or made on account thereof.


15. The lessee or its concessionaires shall not discriminate against any person or persons because of race, creed, color, or national origin in the conduct of its operations hereunder. The grantee furnishes as part of this contract an assurance (Exhibit "B") that he will comply with Title VI of the Civil Rights Act of 1964 (78 Stat. 241) and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations.

16. All notices to be given pursuant to this lease shall be addressed, if to the lessee, to State of Indiana, Department of Natural Resources, Indianapolis, Indiana 46204, if to the Government, to the District Engineer, Louisville District, Corps of Engineers, P. O. Box 59, Louisville, Kentucky 40201, or as may from time to time be directed by the parties. Notice shall be deemed to have been duly given if and when inclosed in a properly sealed envelope or wrapper, addressed as aforesaid and deposited postage prepaid (or, if mailed by the Government, deposited under its franking privilege) in a post office or branch post office regularly maintained by the United States Government.

17. This lease is subject to all existing easements, and easements subsequently granted, for roadways, and utilities located or to be located on the premises, provided that the proposed grant of any easement will be coordinated with the lessee and easements will not be granted which will interfere with developments, present or proposed, by the lessee.

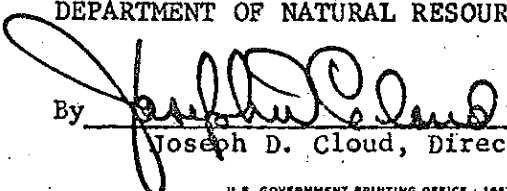
Conditions Nos. 18 through 28 are set forth on attached sheet.

IN WITNESS WHEREOF I have hereunto set my hand this 2<sup>ND</sup> of JANUARY, 1974, by direction of the Assistant Secretary of the Army.

  
Gordon M. Hobbs  
Assistant for Real Property  
OASA(I&L)

The above instrument, together with the provisions and conditions thereof, is hereby accepted this thirteenth day of November, 1973

STATE OF INDIANA  
DEPARTMENT OF NATURAL RESOURCES

By   
Joseph D. Cloud, Director

18. That, as of the commencement date of this lease, an inventory and condition report of all personal property and improvements of the Government included in this lease shall be made by a representative of the Government and a representative of the lessee to reflect the then present condition of said property. A copy of said inventory and condition report shall be attached hereto and become a part hereof, as fully as if originally incorporated herein. Upon the expiration, revocation, or termination of this lease, a similar inventory and condition report shall be prepared and submitted to the said officer, said inventory and condition report to constitute the basis of settlement by the lessee with said officer for the leased property shown to be lost, damaged, or destroyed, any such property to be either replaced or restored to the condition required by Condition No. 14 hereof, or at the election of the Government reimbursement made therefor by the lessee at the then current market value thereof.

19. That concession agreements entered into pursuant to Condition No. 3 above will require that the concessionaire obtain liability insurance from a reputable insurance company, acceptable to the Government, providing minimum protection of the Government in limits of \$50,000.00 per person for any one claim, and an aggregate limit of \$150,000.00 for any number of persons or claims arising from any one incident with respect to bodily injuries or death resulting therefrom, and \$5,000.00 for damage to property suffered or alleged to have been suffered by any person or persons resulting from the operations (by or of) the concessionaire under the concession agreement. Such insurance coverage will be obtained prior to initiation of the operation by the concessionaire and be carried for the full term of the concession agreement.

20. That the lessee, in exercising its governmental or proprietary functions, on the areas specified for fish and wildlife management may plant and harvest crops, either directly or by service contract or under sharecrop agreements with local farmers, to provide: (a) food for wildlife and (b) necessary compensation to farmers under any sharecrop agreement. Recognizing that a poor crop season may result in a lack of food for wildlife in a given future year, the lessee will be allowed to provide a reasonable surplus which will be held in reserve against a future poor crop season or may be disposed of by the State and the proceeds from the sale held in reserve against a future poor crop season. In any event, the lands will not be used by the State for the production of crops or any other purpose solely to produce revenue to defray costs of management of the wildlife area. Lands within the leased area available for agricultural or grazing purposes will be leased by the District Engineer. Monies collected by the State and not used to provide food for wildlife in a poor crop season shall be paid to the District Engineer at five-year intervals. The lessee will establish and maintain adequate records and accounts and render periodic statements of receipts and expenditures in furtherance of its wildlife feeding program, as may be required by said District Engineer.

21. That the lessee may take, trap, remove, stock or otherwise control all forms of fish and wildlife within the said area, and may place therein such additional forms of fish and wildlife as it may desire from time to time, and shall have the right to close the area or any parts thereof from time to time to fishing, hunting or trapping, provided that the closing of any area to such

use for fishing, hunting, or trapping shall be consistent with the State laws for the protection of fish and wildlife; also, the lessee shall enforce the fish and game laws and such orders and regulations as may be issued by the Division of Game and Fish, and/or its Director, which laws, orders, and regulations are consistent with its state-wide program.

22. That the water areas of the project shall be open to public use for boating, swimming, bathing, fishing and other recreational purposes, and that ready access to and exit from such water areas along the shores of the project shall be maintained for general public use, when such use is determined by the Secretary of the Army not to be contrary to the public interest. However, no use of any area shall be permitted which is inconsistent with the state laws for the protection of fish and game.

23. That no cuts or fills along the shoreline shall be made by the lessee without the prior approval of the said District Engineer.

24. That ingress to and egress from the project area shall be afforded the lessee over existing access roads, such interior roads as may be constructed, and at such additional places over Government-owned land as may be approved by said District Engineer. The lessee shall provide appropriate markings at its own expense.

25. If and when a General Plan is approved pursuant to Section 3 of the Fish and Wildlife Coordination Act, as amended (72 Stat. 566; 16 U.S.C. 663), this lease will be amended to the extent necessary to conform to such General Plan.

26. That this lease is subject to the rights, if any, of the State of Indiana in the bed, banks and waters of the streams within or adjacent to the leased area under the provisions of applicable statutes and/or case law of the State of Indiana and/or the United States of America.

27. That, within the limits of their respective legal powers, the parties to the lease shall protect the project against pollution of its water. The lessee shall comply promptly with any regulations, conditions, or instructions affecting the activity hereby authorized if and when issued by the Environmental Protection Agency and/or a state water pollution control agency having jurisdiction to abate or prevent water pollution. Such regulations, conditions, or instructions in effect or prescribed by the Environmental Protection Agency or state agency are hereby made a condition of this lease.

28. That prior to execution of this lease, the granting clause and Conditions Nos. 5 and 15 were modified. Conditions No. 18 through 28 were added. Conditions Nos. 10 and 11 were deleted.



EXHIBIT B

ASSURANCE OF COMPLIANCE WITH THE DEPARTMENT OF DEFENSE DIRECTIVE  
UNDER TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

The State of Indiana, Department of Natural Resources

Applicant-Recipient, hereinafter called the Grantee, HEREBY AGREES THAT it will comply with Title VI of the Civil Rights Act of 1964 (P.L.88-352) and all requirements imposed by or pursuant to the Directive of the Department of Defense (32 CFR Part 300, issued as Department of Defense Directive 5500.11, December 28, 1964) issued pursuant to that title, to the end that, in accordance with Title VI of that Act and the Directive, no person in the United States shall, on the ground of race, color or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Grantee receives Federal financial assistance from the Secretary of the Army, hereinafter called the Grantor and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Grantee by the Grantor, assurance shall obligate the Grantee, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Grantee for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Grantee for the period during which the Federal financial assistance is extended to it by the Grantor.

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Grantee by the Grantor, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Grantee recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Grantee, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Grantee.

Dated November 13, 1973

STATE OF INDIANA  
DEPARTMENT OF NATURAL RESOURCES  
Grantee

Indianapolis, Indiana 46204  
Mailing Address

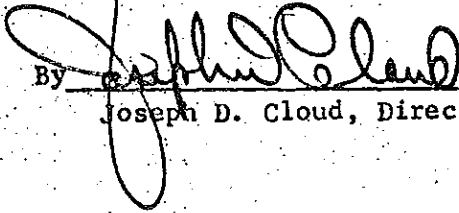
By   
Joseph D. Cloud, Director

EXHIBIT "B"

DEPARTMENT OF THE ARMY

LEASE

No. DACW-27-1-73-128

FOR PUBLIC PARK AND RECREATIONAL PURPOSES

(Tracts Nos. 2109, 2209, and 2210)

BROOKVILLE LAKE, INDIANA, PROJECT AREA

THE SECRETARY OF THE ARMY under authority of Section 4 of the Act of Congress approved 22 December 1944, as amended (16 U.S.C. 460d), hereby grants to Board of County Commissioners, Union County, Indiana, a lease for a period of ten (10) years commencing on 1 January 1973 and ending on 31 December 1982, to use and occupy approximately 19.08 acres of land and water areas under the primary jurisdiction of the Department of the Army in the Brookville Lake Project Area, hereinafter referred to as the premises as shown on attached Exhibit "A"

numbered Segments 21 & 22, dated 4-1-69 & 2-2-67, for public park and recreational purposes.

THIS LEASE is granted subject to the following conditions:

1. The lessee shall conform to such regulations as the Secretary of the Army may issue to govern the public use of the project area, and shall comply with the provisions of the above cited Act of Congress. The lessee shall protect the premises from fire, vandalism, and soil erosion, and may make and enforce such regulations as are necessary, and within its legal authority, in exercising the privileges granted in this lease, provided that such regulations are not inconsistent with those issued by the Secretary of the Army or with provisions of the above cited Act of Congress.

2. The lessee shall administer and maintain the premises in accordance with the U.S. Army Engineers' Master Plan and the implementing General Development Plan for the premises and with an Annual Management Program to be mutually agreed upon between the lessee and the U.S. Army District Engineer in charge of the administration of the project, which may be amended from time to time as may be necessary. Such Annual Management Program shall include, but is not limited to, the following:

- a. Plans for management activities to be undertaken by the lessee or jointly by the U.S. Army Engineers and the lessee, including improvements and other facilities to be constructed thereon.
- b. Budget of the lessee for carrying out the management activities.
- c. Personnel to be used in the management of the area.

3. The lessee shall provide the facilities and services necessary to meet the public demand either directly or through concession agreements with third parties. All such agreements shall state that they are granted subject to the provisions of this lease and that the concession agreement will not be effective until approved by the District Engineer.

4. Admission, entrance or user fees may be charged by the lessee for the entrance to or use of the premises or any facilities constructed thereon, PROVIDED, prior written approval of the District Engineer is obtained.

5. The amount of any fees and all rates and prices charged by the lessee or its concessionaires for accommodations, food (except packaged goods), and services furnished or sold to the public shall be subject to the prior approval of the District Engineer. The lessee shall, by 15 April and 15 October of each year, submit to the District Engineer for approval a list of the fees, rates and prices proposed for the following 6 months, including justification for any proposed increase or decrease. The District Engineer will give written notice to the lessee of his approval of or objection to any proposed fee, rate or price and will, if appropriate, state an approved fee, rate or price for each item to which an objection has been made. The lessee and/or its concessionaires shall keep a schedule of such fees, rates or prices posted at all times in a conspicuous place on the leased premises.

6. All monies received by the lessee from operations conducted on the premises, including, but not limited to, entrance and admission fees and user fees and rental or other consideration received from its concessionaires, may be utilized by the lessee for the administration, maintenance, operation and development of the premises. Any such monies not so utilized, or programmed for utilization within a reasonable time, shall be paid to the District Engineer at the end of each 5-year period. The lessee shall establish and maintain adequate records and accounts and render annual statements of receipts and expenditures to the District Engineer, except for annual or weekly entrance fees which also are honored at other recreational areas operated by the lessee. The District Engineer shall have the right to perform audits of the lessee's records and accounts, and to require the lessee to audit the records and accounts of third party concessionaires, and furnish the District Engineer a copy of the results of such an audit.

7. All structures shall be constructed and landscaping accomplished in accordance with plans approved by the District Engineer. Further, the lessee shall not discharge waste or effluent from the premises in such a manner that such discharge will contaminate streams or other bodies of water or otherwise become a public nuisance.

8. The right is reserved to the United States, its officers, agents, and employees, to enter upon the premises at any time and for any purpose necessary or convenient in connection with river and harbor and flood control work, and to remove timber or other material required for such work, to flood the premises when necessary, and/or to make any other use of the land as may be necessary in connection with public navigation and flood control, and the lessee shall have no claim for damages of any character on account thereof against the United States or any agent, officer or employee thereof.

9. Any property of the United States damaged or destroyed by the lessee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the lessee to the satisfaction of the District Engineer.

10. The United States shall not be responsible for damages to property or injuries to persons which may arise from or be incident to the exercise of the privileges herein granted, or for damages to the property of the lessee, or for damages to the property or injuries to the person of the lessee's officers, agents, servants, or employees or others who may be on the premises at their invitation or the invitation of any one of them, arising from or incident to the flooding of the premises by the Government or flooding from any other cause, or arising from or incident to any other governmental activities, and the lessee shall hold the United States harmless from any and all such claims.

11. That at the time of the commencement of this lease, the lessee will obtain from a reputable insurance company, acceptable to the Government, liability or indemnity insurance providing for minimum limits of \$ 50,000.00 per person in any one claim, and an aggregate limit of \$ 150,000.00 for any number of persons or claims arising from any one incident with respect to bodily injuries or death resulting therefrom, and \$ 5,000.00 for damage to property suffered or alleged to have been suffered by any person or persons resulting from the operations of the lessee under the terms of this lease.

12. This lease may be relinquished by the lessee at any time by giving to the Secretary of the Army, through the District Engineer, at least 30 days' notice in writing.

13. This lease may be revoked by the Secretary of the Army in the event the lessee violates any of the terms and conditions of this lease and continues and persists therein for a period of 30 days after notice thereof in writing by the District Engineer.

14. On or before the date of expiration of this lease or its relinquishment by the lessee, the lessee shall vacate the premises, remove its property therefrom, and restore the premises to a condition satisfactory to the District Engineer. If, however, this lease is revoked, the lessee shall vacate the premises, remove its property therefrom, and restore the premises as aforesaid within such time as the Secretary of the Army may designate. In either event, if the lessee shall fail or neglect to remove its property and so restore the premises, then its property shall become the property of the United States without compensation therefor, and no claim for damages against the United States or its officers or agents shall be created by or made on account thereof.

15. The lessee or its concessionaires shall not discriminate against any person or persons because of race, creed, color, or national origin in the conduct of its operations hereunder. The grantee furnishes as part of this contract an assurance (Exhibit "B") that he will comply with Title VI of the Civil Rights Act of 1964 (78 Stat. 241) and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations.

16. All notices to be given pursuant to this lease shall be addressed, if to the lessee, to Board of County Commissioners, Union County, Liberty, Indiana 47353, if to the Government, to the District Engineer, Louisville District, Corps of Engineers, P. O. Box 59, Louisville, Kentucky 40201, or as may from time to time be directed by the parties. Notice shall be deemed to have been duly given if and when inclosed in a properly sealed envelope or wrapper, addressed as aforesaid and deposited postage prepaid (or, if mailed by the Government, deposited under its franking privilege) in a post office or branch post office regularly maintained by the United States Government.

17. This lease is subject to all existing easements, and easements subsequently granted, for roadways, and utilities located or to be located on the premises, provided that the proposed grant of any easement will be coordinated with the lessee and easements will not be granted which will interfere with developments, present or proposed, by the lessee. Conditions Nos. 18, 19, 20, and 21 are set forth on attached sheet.

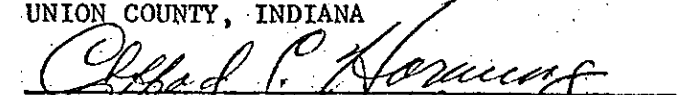
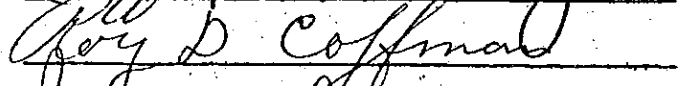

IN WITNESS WHEREOF I have hereunto set my hand this 23<sup>rd</sup> day of APRIL, 1973, by direction of the Assistant Secretary of the Army.

  
Gordon M. Hobbs

Assistant for Real Property  
OASA(I&L)

The above instrument, together with the provisions and conditions thereof, is hereby accepted this 15th day of January, 1973

BOARD OF COUNTY COMMISSIONERS  
UNION COUNTY, INDIANA

18. That concession agreements entered into pursuant to Condition No. 3 above will require that the concessionaire obtain liability insurance from a reputable insurance company, acceptable to the Government, providing minimum protection of the Government in limits of \$50,000.00 per person for any one claim, and an aggregate limit of \$150,000.00 for any number of persons or claims arising from any one incident with respect to bodily injuries or death resulting therefrom and \$5,000.00 for damage to property suffered or alleged to have been suffered by any person or persons resulting from the operations (by or of) the concessionaire under the concession agreement. Such insurance coverage will be obtained prior to initiation of operation by the concessionaire and be carried for the full term of the concession agreement.

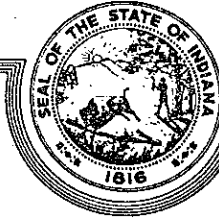
19. That, within the limits of their respective legal powers, the parties to the lease shall protect the project against pollution of its water. The lessee shall comply promptly with any regulations, conditions, or instructions affecting the activity hereby authorized if and when issued by the Environmental Protection Agency and/or a state water pollution control agency having jurisdiction to abate or prevent water pollution. Such regulations, conditions, or instructions in effect or prescribed by the Environmental Protection Agency or state agency are hereby made a condition of this lease.

20. That the lessee is hereby authorized to enter into a third-party concession agreement with Treaty-Line Museum, Inc., Liberty, Indiana, subject to prior approval of the terms of the agreement by the said District Engineer.

21. That prior to execution of this lease Conditions Nos. 5 and 15 were modified and Conditions Nos. 18, 19, 20, and 21 were added.

EXHIBIT C

# STATE OF INDIANA



INDIANAPOLIS, 46204

DEPARTMENT OF NATURAL RESOURCES

JOSEPH D. CLOUD  
DIRECTOR

608 State Office Building  
May 4, 1979

Colonel Thomas P. Nack  
District Engineer  
U.S. Army Corps of Engineers  
P. O. Box 59  
Louisville, Kentucky 40201

Dear Colonel Nack:

The Department of Natural Resources has completed review of the Draft Brookville Lake updated Master Plan. The attached comments with reference page numbers are being submitted to you for your consideration and incorporation in the final Master Plan.

If you have any questions, do not hesitate to contact me.

Sincerely,

Joseph D. Cloud, Director  
Department of Natural Resources

JDC/NCM/jds

EXHIBIT C



BROOKVILLE RESERVOIR  
COMMENTS - MASTER PLAN

- Page 29 1979 existing campsites: 469.
- Page 41 Exclude riding concession from Mounds Area.
- Page 42 370 campsites existing in Mounds.  
Boat rental concession no longer operated at Templeton  
Creek ramp.
- Page 43 Remove #6; Riding Concession from future plans.
- Page 46 Remove future consideration of a marina at Fairfield  
ramp.
- Page 47 Remove #3; future consideration for another marina.
- Page 50 #4; an additional 100 car/trailer spaces are to be  
added in the near future.  
#5; an additional 48 boat rental slips are being add-  
ed in the future.
- Page 51 #7; a Service Area is being located at Quakertown near  
the campground rather than south of the ramp.
- Page 54 A sailboat dock, storage area, parking lot and other  
related facilities will be located near the existing ramp.  
#3; Indiana State Highway is in the process of improving  
the Hanna Creek access road from State Road 101.
- Page 66 Add Class AA sites; electricity, access to showers, flush  
toilets and sewer hook-ups. Fee: \$5.00  
Class A sites: \$4.00.
- Page 67 Replace with new organizational chart.
- Page 68 Class B sites: fee \$3.00  
Class C sites: fee \$2.00  
Buoy and dock rates for the 1979 season:
- |                   |          |                |
|-------------------|----------|----------------|
| Buoys - Fairfield | \$220.00 | 5 month season |
| Quakertown        | 270.00   | 6 month season |
- Open Slips (14 x 40) Delete \$275.00  
\$500.00 with electricity