

AD-A041 277

ARMY ENGINEER DIV OHIO RIVER CINCINNATI
OHIO RIVER BASIN COMPREHENSIVE SURVEY. VOLUME IX. APPENDIX H. 0--ETC(U)
JUN 66

F/G 8/6

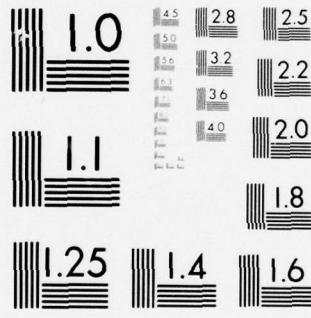
UNCLASSIFIED

NL

1 OF 3

AD
A041277





MICROCOPY RESOLUTION TEST CHART
 NATIONAL BUREAU OF STANDARDS-1963-A

ADA 041 277

OHIO RIVER BASIN

VOLUME IX

Onw



COMPREHENSIVE SURVEY

DDC
 RECEIVED
 JUL 7 1977
 REGULATED

JA - A

STATEMENT A
 Approved for public release;
 Distribution Unlimited

Appendix H
 FORMAL REVIEW DRAFT
 OUTDOOR RECREATION

Prepared by
 Bureau of Outdoor Recreation,
 U.S. Department of Interior
 in cooperation with Departments
 of Agriculture, Army, Commerce,
 Health, Education and Welfare,
 the Federal Power Commission
 and participating states.

U.S. ARMY ENGINEER DIVISION, OHIO RIVER-CINCINNATI, OHIO

FILE COPY

1

OUTDOOR RECREATION STUDY
OF THE
OHIO RIVER BASIN

6
APPENDIX H
OHIO RIVER BASIN COMPREHENSIVE SURVEY.
Volume IX.
Appendix H.

Prepared for
U. S. Army Engineer Division, Ohio River
Corps of Engineers
Cincinnati, Ohio

12 197p.

by
Bureau of Outdoor Recreation
Lake Central Region
Ann Arbor, Michigan

D D C
RECEIVED
JUL 7 1977
A

11
June 1966

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

410 257

4B



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
LAKE CENTRAL REGION
3853 RESEARCH PARK DRIVE
ANN ARBOR, MICHIGAN 48104

IN REPLY REFER TO:

D64270H

November 21, 1966

Division Engineer
U.S. Army Engineer Division, Ohio River
P. O. Box 1159
Cincinnati, Ohio 45201

Dear Sir:

It is a pleasure to transmit the Bureau of Outdoor Recreation's report, Outdoor Recreation Study of the Ohio River Basin, to be appended to the main report of the Ohio River Basin Comprehensive Survey.

This report, designated as Appendix H to the main report, presents our findings regarding general outdoor recreation in the Ohio River Basin. Our study indicated that a growing need exists for the development of additional recreation facilities throughout the basin. This report specifies those areas of the basin in which the needs for water-related outdoor recreational opportunities are greatest. The report also suggests, in general terms, possible alternative approaches to alleviating the needs. Any future planning studies which utilize this report should consider the limitations placed on the analysis by data availability and necessary assumptions.

The report should be viewed as a prelude to future recreational planning efforts and as a possible stimulant to thought and action by those having responsibility for the development of the water resources in the Ohio River Basin.

Sincerely yours,

Roman H. Koenings
Roman H. Koenings
Regional Director

| | |
|-------------------------------------|-------------------------------------|
| ACCESSION FOR | |
| NTIS | <input checked="" type="checkbox"/> |
| DOC | <input type="checkbox"/> |
| UNANNOUNCED | <input type="checkbox"/> |
| JUSTIFICATION | |
| BY | |
| DISTRIBUTION / RESPONSIBILITY CODES | |
| DATE | APPROVAL / SIGNATURE |
| A | |

FOREWORD

The current National outdoor recreation policy is embodied in the opening passage of Public Law 88-29, approved May 28, 1963, by the United States Congress:

. . . the Congress finds and declares it is desirable that all American people of present and future generations be assured adequate outdoor recreation resources, and that it is desirable for all levels of government and private interests to take prompt and coordinated action to the extent practicable without diminishing or affecting their respective powers and functions to conserve, develop, and utilize such resources for the benefit and enjoyment of the American people.

ACKNOWLEDGEMENTS

Federal, state, county and municipal agencies, private organizations, and individuals located in the several states within the basin have contributed immeasurably to this study in the way of pertinent data, technical assistance and constructive comments. Within the many agencies contacted in the course of the study were numerous individuals who gave much of their time and knowledge. The Bureau is indebted to these many agencies, organizations, and individuals for their cooperation and assistance in the formulation of the report. Special acknowledgement should go to the National Park Service, Region Five, for its role in initiating the study and its cooperation in effecting the transition to participation by this Bureau.

Population projections and general economic data used in the study were extracted from the Projective Economic Study. Other basic data used in the projection of demands and needs were garnered from the Outdoor Recreation Resources Review Commission Study Reports (ORRRC) and information supplied by the various state and Federal agencies involved in the comprehensive study.

SUMMARY

The recreation phase of the Ohio River Basin Comprehensive Survey endeavors to determine the prospective demands and needs for water-related outdoor recreation opportunities in the Ohio River Basin in the years 1980, 2000, and 2020. The needs are presented relative to the supply in the base year, 1960. The methodology used in ascertaining the outdoor recreation demands and needs utilizes individual recreation activity participation rates and estimates of increases in recreation demand developed in the Outdoor Recreation Resources Review Commission Study Reports 1 through 27. Eight outdoor recreation activities considered in the ORRRC studies were determined to be water-enhanced or water-dependent and were used in developing the prospective demands for water-related recreation facilities in the basin. The selected activities were: swimming, boating, water skiing, picnicking, camping, sightseeing, nature walks, and hiking.

The recreational needs (unsatisfied demands) in the basin were determined by relating inventoried 1960 supply to the estimated demands in the target years. The 1960 supply was considered to be the 1960 visitation at basin facilities administered by Federal, state, and local agencies and was obtained from the nationwide plan inventory developed by the Bureau of Outdoor Recreation in conjunction with Federal, state, and local agencies.

The basin is delineated along county lines as in the Projective Economic Study and encompasses 161,690 square miles in 386 counties (including two counties in New York which were not part of the Projective Economic Study). The basin is divided into 19 subareas similar to those delineated in the economic study with the exception that Subarea A (Allegheny River Basin) includes Chautauqua and Cattaraugus Counties in New York. An included study area encompassing 107 counties within a reasonable driving distance of the basin was considered in the study in recognition of the resource developments and potential origination of outdoor recreation demands in the immediate vicinity of the basin. A map depicting the component study areas is shown on Plate 1.

Estimates of water-related outdoor recreation demands and needs were determined for both the basin and the 19 subareas. These estimates are illustrated graphically in Figures 1 through 4 on the following pages.

FIGURE 1

ESTIMATED ANNUAL ACTIVITY DAYS IN TARGET YEARS
(8 Selected Activities)

OHIO RIVER BASIN

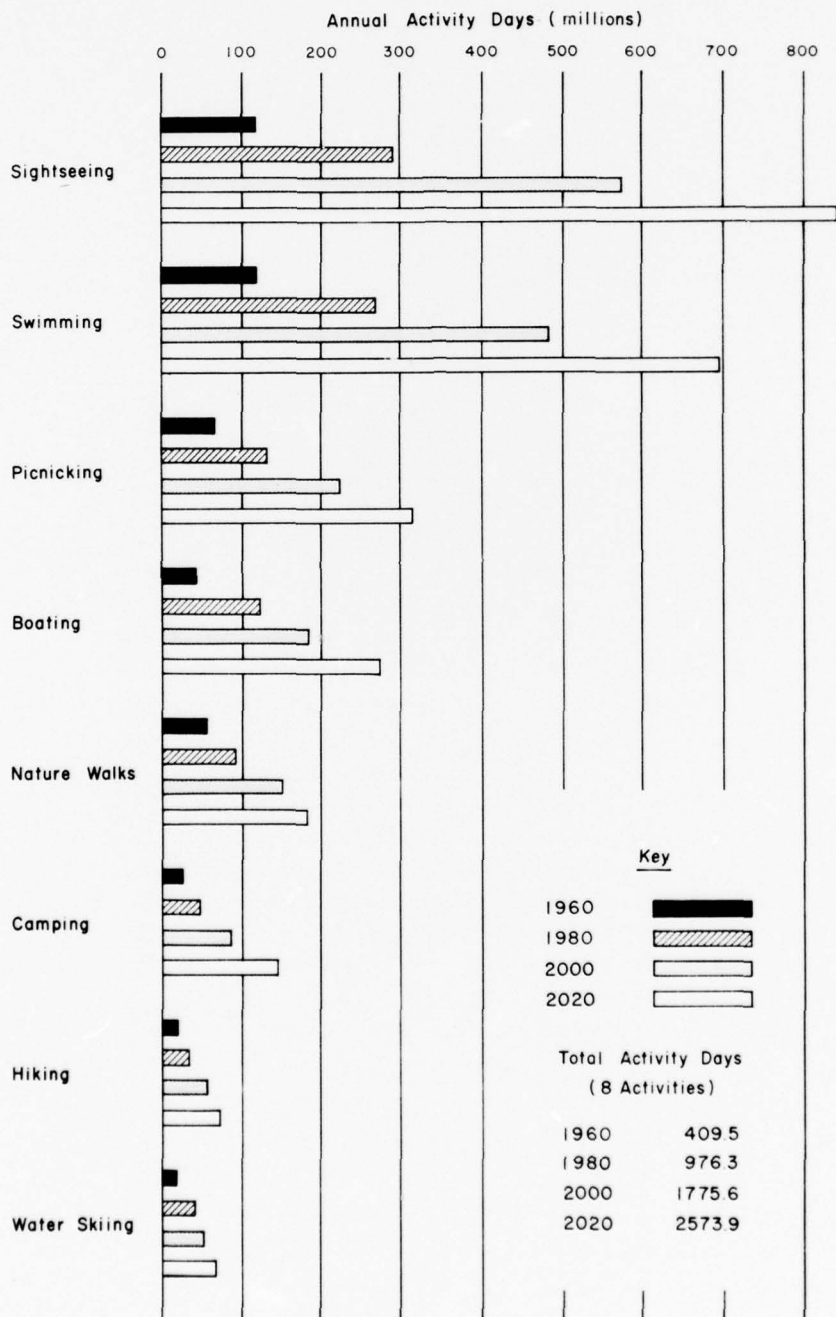


FIGURE 2

ESTIMATED DEMANDS AND NEEDS
OHIO RIVER BASIN

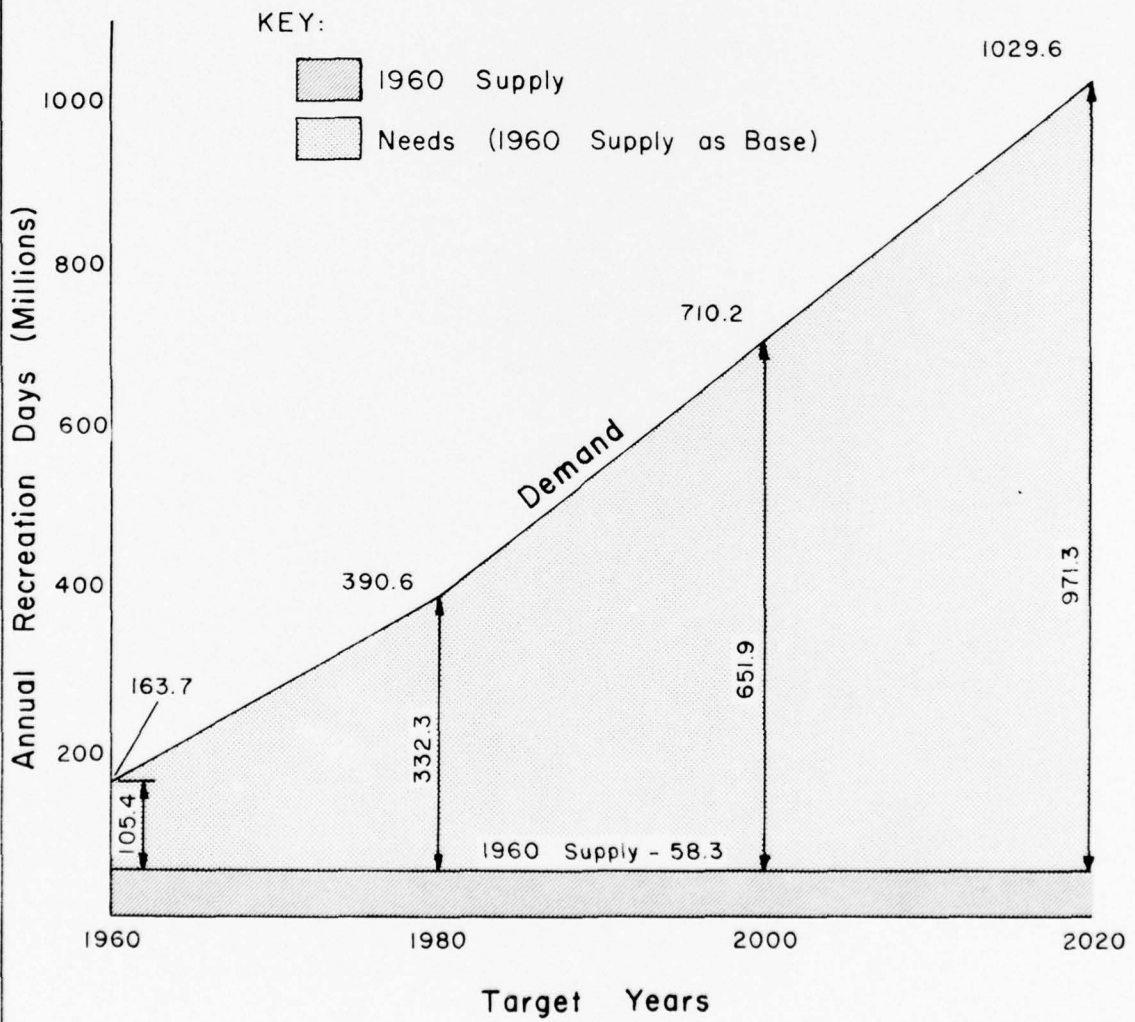


FIGURE 3

ESTIMATED ANNUAL OUTDOOR RECREATION DEMANDS BY BASIN ECONOMIC SUBAREAS OHIO RIVER BASIN

Annual Recreation Days Demand (millions)

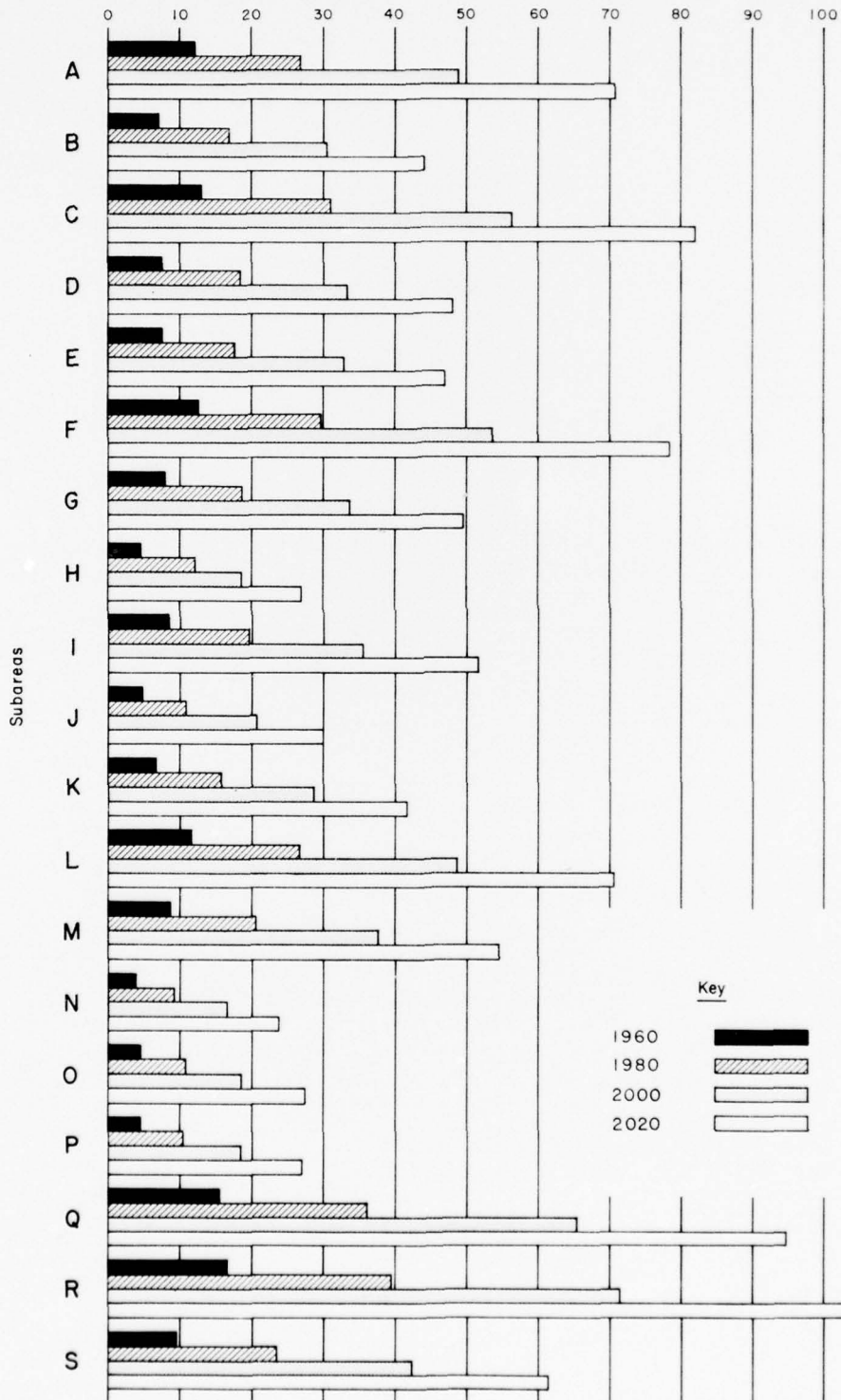
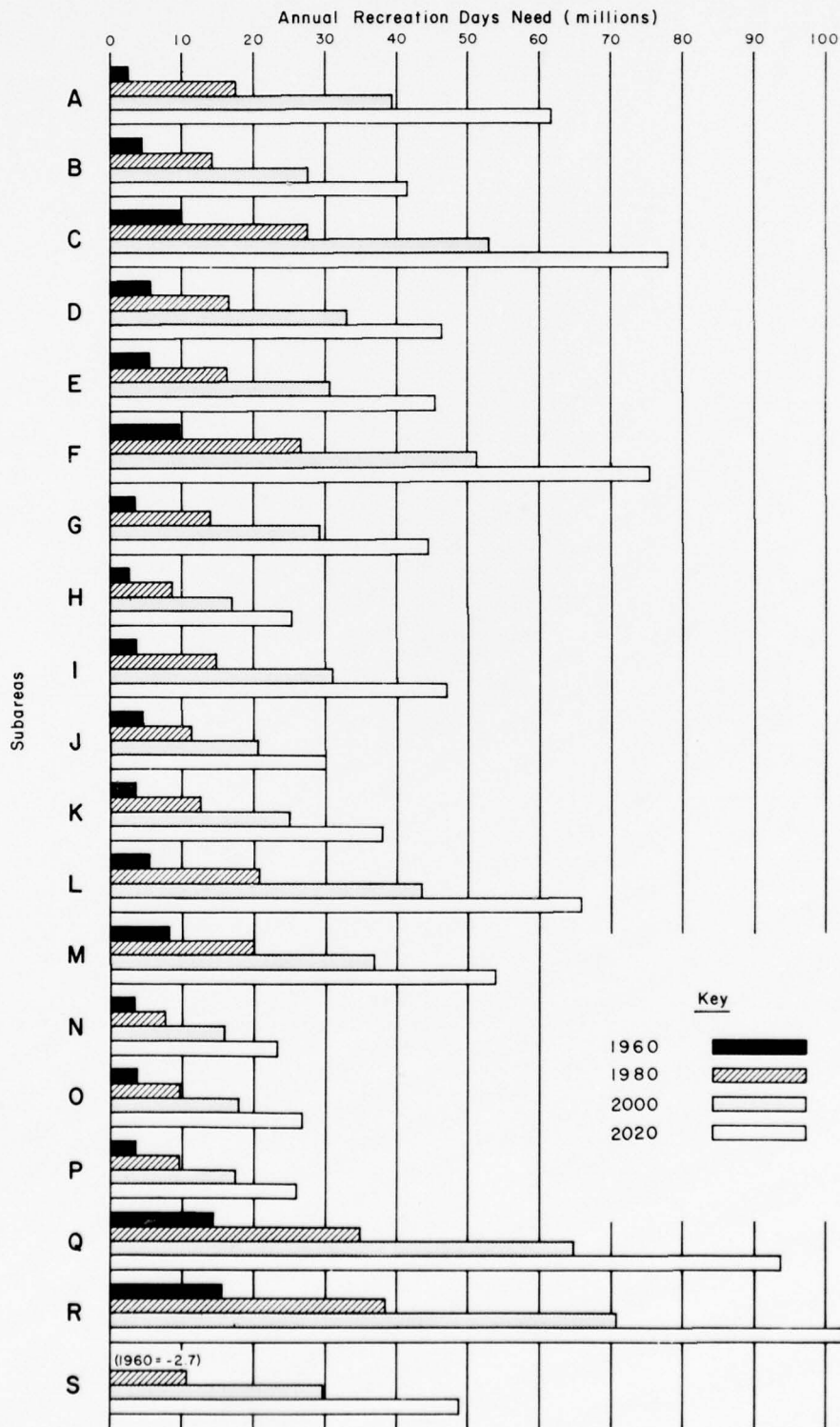


FIGURE 4

ESTIMATED ANNUAL OUTDOOR RECREATION NEEDS
BY BASIN ECONOMIC SUBAREAS

OHIO RIVER BASIN



The inventoried Federal, state and local agency programs for future acquisition and development of recreation resources are not adequate to satisfy the estimated needs in the base year, 1960. Seven of the subareas show a higher than average (basin) need for recreational development by the year 2020: Wabash (R), White (Q), Pittsburgh SMSA (C), Muskingum (F), Little Miami-Miami (L), Allegheny (A), and Licking-Kentucky-Salt (M). The Ohio-Louisville (N) and Ohio-Huntington (H) Subareas display the least need for development, but further development beyond that presently programmed in these subareas will be necessary to adequately satisfy the estimated recreational demands in the target years. Although five of the subareas - Monongahela (B), Kanawha-Little Kanawha (G), Guyandot-Big Sandy-Little Sandy (J), Green (P) and Cumberland (S) - show a less than average (basin) need for recreational facilities in the target years, the abundant resources of these areas are potentially capable of satisfying the excess recreational needs originating from the north and east and west. The needs of the relatively water-resource-poor Pittsburgh SMSA, for example, could possibly be satisfied in the Monongahela and Kanawha-Little Kanawha Subareas through adequate construction of water-oriented recreational facilities and access routes thereto.

Federal ownership of inventoried lands in the basin in 1960 was greater than the combined state and local agency ownership. However, the amount of visitors per acre at Federal areas was less than half that at state areas and only one-seventh of the use pressure at areas administered by local agencies. Almost 75 percent of the inventoried water area available for recreation in the basin was provided by Federal agencies. Approximately 248,000 acres of water were inventoried on a total of over 4,131,000 acres of recreational lands in the basin. Visitations to the inventoried recreation areas exceeded 58 million in the base year, 1960. Over 1,331,000 acres of recreational lands are currently programmed for acquisition and/or development by Federal, state, and local agencies.

The following conclusions were determined from the study of water-oriented outdoor recreation in the Ohio River Basin:

1. All of the nineteen subareas delineated in the basin have a need for additional development to meet the outdoor recreation demands in each of the target years.
2. The estimated demands for water-oriented outdoor recreation opportunities in the target years 1980, 2000, and 2020 indicate a better than two-fold, four-fold, and six-fold increase, respectively, over the demands in 1960. The target year demands are estimated at: 1980 - 390.6 million recreation days, 2000 - 710.2 million recreation days, and 2020 - 1,029.6 million recreation days.
3. The 1960 visitation at inventoried facilities totaled 58.3 million recreation days. Lack of adequate data

on resource capacities required that the inventoried visitation be used as supply.

4. The recreation needs (unsatisfied demands relative to 1960 supply) for the target years were determined to be: 1980 - 332.3 million recreation days, 2000 - 651.9 million recreation days, and 2020 - 971.3 million recreation days.

5. A range of resource requirements to accommodate the unsatisfied demands were estimated to be as follows:

| <u>Year</u> | <u>Acres (1000's)</u> | |
|-------------|-----------------------|------------------|
| | <u>Land</u> | <u>Water</u> |
| 1980 | 638.0 to 2,857.8 | 176.1 to 2,904.3 |
| 2000 | 1,160.4 to 5,801.9 | 365.1 to 6,056.2 |
| 2020 | 1,748.3 to 8,741.7 | 563.4 to 9,207.9 |

6. Estimates of capital costs of development to meet the unsatisfied demands were as follows:

| <u>Year</u> | <u>Development Costs (millions)</u> |
|-------------|-------------------------------------|
| 1980 | \$ 747.7 to \$1,495.4 |
| 2000 | 1,466.8 to 2,933.6 |
| 2020 | 2,185.4 to 4,370.8 |

The report recommends that:

1. Planning and development programs for water-oriented outdoor recreation resources be accelerated by all public agencies in each of the basin's 19 subareas.
2. Detailed studies of the basin's navigable waterways be undertaken to ascertain the extent to which the waterways can alleviate recreational needs.
3. Scenic roads and parkways be planned and constructed as an integral part of water resource developments.
4. Potential scenic riverways be studied in detail to determine their capabilities for meeting a portion of the water-related demands in the basin.
5. The Wabash, White, Pittsburgh SMSA, Muskingum, Little Miami-Miami, Allegheny, and Licking-Kentucky-Salt Subareas be given primary consideration for any detailed studies to alleviate the water-oriented recreational needs of the basin.
6. The recreational programs of all agencies administering recreation facilities be considered in any detailed planning studies of the subareas and the basin.

OUTDOOR RECREATION STUDY
OF THE
OHIO RIVER BASIN

APPENDIX H
OHIO RIVER BASIN COMPREHENSIVE SURVEY

TABLE OF CONTENTS

| | <u>Page</u> |
|--------------------------------|-------------|
| FORWARD | i |
| ACKNOWLEDGEMENTS | ii |
| SUMMARY | iii |
| I. INTRODUCTION | 1- 1 |
| A. Authority | 1- 1 |
| B. Purpose | 1- 1 |
| C. Scope | 1- 2 |
| D. Background | 1- 2 |
| E. Definitions | 1- 2 |
| F. Basic Assumptions | 1- 4 |
| II. GENERAL DESCRIPTION | 2- 1 |
| A. Physical | 2- 1 |
| 1. General | 2- 1 |
| 2. Physiography | 2- 1 |
| 3. Climate | 2- 2 |
| B. Socio-Economic | 2- 2 |
| 1. Population | 2- 2 |
| 2. Economic Activities | 2- 3 |
| 3. Transportation | 2- 4 |
| III. DEMAND, SUPPLY, AND NEEDS | 3- 1 |
| A. Recreation Market Area | 3- 1 |
| B. Recreation Demand | 3- 1 |
| 1. General | 3- 1 |
| 2. Methodology | 3- 2 |
| C. Recreation Supply | 3- 6 |
| 1. Existing areas | 3- 6 |
| 2. Potential areas | 3- 8 |
| D. Recreation Needs | 3- 8 |
| 1. General | 3- 8 |
| 2. Methodology | 3- 9 |

| TABLE OF CONTENTS (Cont.) | <u>Page</u> |
|---------------------------------------------------|-------------|
| IV. OUTDOOR RECREATION PLAN | 4- 1 |
| A. Appraisal of Recreation Potentials | 4- 1 |
| B. Establishment of Goals (Resource Requirements) | 4- 2 |
| C. Alternatives | 4- 4 |
| D. Features of the Plan | 4- 4 |
| V. SUBAREA EVALUATIONS | 5- 1 |
| A. Allegheny | 5- 2 |
| B. Monongahela | 5- 5 |
| C. Pittsburgh SMSA | 5- 8 |
| D. Beaver | 5-11 |
| E. Upper Ohio | 5-14 |
| F. Muskingum | 5-17 |
| G. Kanawha-Little Kanawha | 5-21 |
| H. Ohio-Huntington | 5-24 |
| I. Scioto | 5-27 |
| J. Guyandot-Big Sandy-Little Sandy | 5-30 |
| K. Ohio-Cincinnati | 5-33 |
| L. Little Miami-Miami | 5-36 |
| M. Licking-Kentucky-Salt | 5-39 |
| N. Ohio-Louisville | 5-42 |
| O. Lower Ohio-Evansville | 5-45 |
| P. Green | 5-48 |
| Q. White | 5-51 |
| R. Wabash | 5-54 |
| S. Cumberland | 5-58 |
| VI. CONCLUSIONS | 6- 1 |
| VII. RECOMMENDATIONS | 7- 1 |

LIST OF APPENDIXES

| | |
|--------------|--------------------------------------------------------------------|
| APPENDIX I | - Tables of Recreation Demand, Supply and Need |
| | Table I Estimated Annual Activity Days |
| | Table II Estimated Annual Outdoor Recreation Demands |
| | Table III Summary of Inventoried Annual Attendance--1960 |
| | Table IV Estimated Annual Outdoor Recreation Needs |
| | Sample Procedure of Demand Methodology |
| APPENDIX II | - Inventory of Outdoor Recreation Facilities |
| | Existing Areas |
| | Potential Areas |
| APPENDIX III | - County Composition of Ohio River Basin Subareas |
| APPENDIX IV | - Policies Affecting Water-Oriented Outdoor Recreation Development |

LIST OF PLATES

| <u>Title</u> | <u>Plate Number</u> |
|----------------------------------------------------------|---------------------|
| Study Areas | 1 |
| Rivers | 1A |
| Interstate Route System | 2 |
| Interstate Route System by States: | |
| Illinois | 3 |
| Indiana | 4 |
| Ohio | 5 |
| Pennsylvania and New York | 6 |
| West Virginia, Maryland, Virginia, and North Carolina | 7 |
| Kentucky and Tennessee | 8 |
| Existing Outdoor Recreation Areas by States: | |
| Illinois | 9 |
| Indiana | 10 |
| Ohio | 11 |
| Pennsylvania and New York | 12 |
| West Virginia, Maryland, Virginia, and North Carolina | 13 |
| Kentucky and Tennessee | 14 |
| Potential Outdoor Recreation Areas by States: | |
| Illinois | 15 |
| Indiana | 16 |
| Ohio | 17 |
| Pennsylvania and New York | 18 |
| West Virginia, Maryland, Virginia, and North Carolina | 19 |
| Kentucky and Tennessee | 20 |

OUTDOOR RECREATION STUDY
OF THE
OHIO RIVER BASIN

I. INTRODUCTION

A. Authority. A resolution adopted by the Committee on Public Works of the United States Senate on May 16, 1955, directed the Corps of Engineers, Department of the Army, to conduct a review of reports on the Ohio River "with a view to determining whether any modification in the present comprehensive plan for flood control and other purposes in the Ohio River Basin is advisable at this time." The basic responsibility for the study was assigned to the Division Engineer, U. S. Army Engineer Division, Ohio River.

The initial request for a recreation study of the basin as an integral part of the overall survey was submitted by the Division Engineer to the Regional Director, National Park Service, Region Five, by letter of October 10, 1961. The Park, Parkway and Recreation Area Study Act of June 23, 1936, provided authority for National Park Service participation.

The basic responsibility for the recreation phase of the Ohio River Basin Comprehensive Survey was transferred to the Bureau of Outdoor Recreation after establishment of the Bureau of Outdoor Recreation of the Interior, April 2, 1962. Public Law 88-29, dated May 28, 1963, delegated authority for Bureau of Outdoor Recreation participation in the study. Section 2 (g) of Public Law 88-29 authorizes the Secretary of the Interior to:

- . . . (1) Cooperate with and provide technical assistance to Federal departments and agencies . . .
- and (2) promote coordination of Federal plans and activities generally relating to outdoor recreation
- . . .

B. Purpose. Correspondence from the Division Engineer, U. S. Army Engineer Division, Ohio River, to the Regional Director, National Park Service, Region Five, dated October 10, 1961, and October 8, 1962, set forth the purposes of the recreation phase of the comprehensive survey as a study of current demand and growth of demand on outdoor recreation resources, an inventory of existing and planned facilities, a determination of present and projected need for additional outdoor recreation opportunities, and the designation of areas within the basin where more detailed study will be required. Several potential reservoir projects in the basin were also to be evaluated in detail for immediate consideration. Although, this latter aspect of the study was deleted pursuant to subsequent Guidelines for Framework Studies approved by the Interdepartmental Staff Committee, ad hoc Water Resources Council, some potential sites were evaluated for inventory purposes and to determine

their potential for alleviating a portion of the outdoor recreation needs of the basin. Evaluation of selected potential sites was deemed necessary for a proper analysis of the overall potential of all sites in the basin.

C. Scope. This Appendix H considers the current (base year 1960) and prospective unsatisfied water-related outdoor recreation demands and resource requirements within the Ohio River Basin, exclusive of the Tennessee River Basin, and indicates areas of greatest need for further, more detailed investigation. Resource requirements to meet the unsatisfied demands for water-related outdoor recreation opportunities in 1980, 2000, and 2020 have been determined for the basin. Unsatisfied demands have also been estimated for each of the 19 subareas which were delineated in the Projective Economic Study (Appendix B - Ohio River Basin Comprehensive Survey).

D. Background. The Ohio River Basin Comprehensive Survey was initiated as a result of a Senate Resolution adopted May 16, 1965, requesting the Corps of Engineers to review the reports on the Ohio River published in House Document Numbered 306, Seventy-fourth Congress, First Session, House Committee on Flood Control Document Numbered 1, Seventy-fifth Congress, First Session, and related reports.

An Ohio River Basin Coordinating Committee was formed for the purpose of providing a means for exchanging views among the participating Federal and state agencies. Those Federal agencies represented are the Departments of Agriculture; Army; Commerce; Health, Education and Welfare; and Interior; and the Federal Power Commission. The eleven states in the basin--Ohio, Indiana, Kentucky, West Virginia, New York, Pennsylvania, Illinois, Maryland, Virginia, North Carolina, and Tennessee--are also represented.

E. Definitions. The following definitions are applied to outdoor recreation terminology in this report. These definitions are not considered to deviate to any great degree from existing definitions in general use.

1. Outdoor Recreation - Leisure time activities which utilize an outdoor setting.

2. Outdoor Recreation Activity - A specific leisure time pursuit in an outdoor activity, i.e., picnicking, boating, etc.

3. Outdoor Recreation Resources - Land, water, and associated natural or man-made resources which provide or are capable of providing opportunities for outdoor recreation.

4. Recreation Demand - A measure of the amount of outdoor recreation opportunities which the public desires. The demand is expressed in this report in terms of recreation days.

5. Recreation Supply - The resources and facilities capable of providing outdoor recreation opportunities. The supply is expressed in recreation days of visitation which the resources or facilities accommodate.

6. Recreation Need - The demand for outdoor recreation opportunities less the existing supply, i.e., the unsatisfied demand.

7. Recreation Day - A visit by an individual to a recreation development or area for recreation purposes during any reasonable portion or all of a 24-hour period.

8. Resource Requirements - The land and water areas required to accommodate the unsatisfied outdoor recreation demands.

9. Recreation Market Area - Zone of project influence from which people are drawn for day use or weekend (overnight) outings.

10. Activity Day - The participation by an individual in a particular outdoor recreation pursuit during any part of a day; participation in three activities during a single day constitutes three activity days.

11. Latent Recreation Demand - That recreation demand which is inherent in the population but not reflected in the use of existing facilities; additional participation which could be expected to occur if adequate facilities are made available.

12. Effective Population - That population which is considered to affect the recreation demand of a study area.

13. Leisure - Time not utilized in the principal source of employment.

14. Swimming - "Bathing," skin or scuba diving.

15. Boating - The recreation use of rowboats, outboard and inboard motorboats, rafts, floats, etc. Canoes and sailboats are included in this category for this study.

16. Water Skiing - Any of the various sports where the person is towed behind a boat; includes use of aquaplanes, water skis, etc.

17. Picnicking - An outdoor activity away from home; the primary purpose being the preparation or eating of a meal out-of-doors.

18. Camping - Living out of doors using a bed roll, sleeping bag, trailer, tent, etc., for shelter and carrying one's own bedding, food and cooking equipment.

19. Sightseeing - Looking at some outdoor resource of interest, the major limitation being that the sightseeing must be intentional; does not include casual viewing from car windows.

20. Nature Walks - Walks for the purpose of observing either plants, birds, or animals, and the collection of specimens, photographing natural subjects, etc.

21. Hiking - Walking on trails with a pack which normally includes provisions and some kind of shelter; excludes casual walking and nature walks.

F. Basic Assumptions. The following assumptions were made in the course of the outdoor recreation study of the basin:

1. The estimated demand for water-related outdoor recreation opportunities in the basin would apply through adequate development and administration of basin resources.
2. The demand for opportunities in eight activities - swimming, boating, water skiing, picnicking, camping, sightseeing, nature walks, and hiking - indicates the outdoor recreation demands on the basin's water and related land resources.
3. The participation rate and rate of increase in demand for each recreation activity would be the same for the subareas as for the basin; available data on participation rates is not statistically capable of disaggregation to a subarea level.
4. The inventoried 1960 visitation would be equivalent to the supply in that year (assumed for lack of better data).
5. The average individual would participate in 2.5 activities during a visit to an area in which the eight selected activities are available.
6. The recreation market area of each subarea includes the subarea and all standard metropolitan statistical areas (SMSA's) within 125 miles ($\frac{1}{2}$) of the subarea boundary.
7. Standard metropolitan statistical areas are focal points from which a high percentage of outdoor recreation demand originates.
8. About 60 percent of outdoor recreation use occurs within 40 miles and 90 percent within 125 miles (30 percent between 40-125 miles) of the point of origination if facilities are available.
9. The total recreation demand of a subarea's non-SMSA population would be contained within the subarea. (Immigration for recreational purposes would equal emigration for those purposes.)

II. GENERAL DESCRIPTION

A. Physical.

1. General. The Ohio River Basin as considered in this study encompasses 163,000 square miles drained by the Ohio River and its 18 major tributaries exclusive of the Tennessee River. The basin lies within three of the four census regions delineated by the Bureau of the Census - North Central, Northeast, and South. Portions of 11 states are included within the basin drainage area: New York, Pennsylvania, Ohio, Indiana, Illinois, Kentucky, Tennessee, West Virginia, Maryland, Virginia, and North Carolina. This recreation phase study considers 386 counties in these 11 states as being within the basin.

The Ohio River has the highest volume of flow and is the second largest watershed tributary to the Mississippi River. The Ohio River originates at Pittsburgh, Pennsylvania, at the juncture of the Allegheny and Monongahela Rivers and flows generally southwest for a distance of 981 miles to join the Mississippi River at Cairo, Illinois. The 18 major tributaries which flow into the Ohio River along its route are the Allegheny, Monongahela, Beaver, Muskingum, Little Kanawha, Hocking, Kanawha, Guyan-dot, Big Sandy, Scioto, Little Miami, Licking, Miami, Kentucky, Salt, Green, Wabash, and Cumberland Rivers.

About 10.6 percent of the population of the contiguous 48 states resided in the basin in 1960. The basin land area is approximately 5.5 percent of the total conterminous United States. Six of the Nation's 50 largest cities and 21 of the total 212 standard metropolitan statistical areas (1960 classification) lie within the basin boundaries.

2. Physiography. Six physiographic provinces are found within the Ohio River Basin: Appalachian Plateau, Central Lowland, Interior Low Plateau, Valley and Ridge, Blue Ridge, and Coastal Plain. The latter comprises only a small area near the mouth of the Ohio River. Topography varies from the rugged, forested Appalachian Mountains in the east to relatively level farmlands in the north-central portion of the basin. Rough, unglaciated lands border the Ohio River from Pennsylvania through Illinois. North of the river lie glacial plain farmlands which are drained by meandering rivers flowing through wide, flat valley floors. The lands to the south are level in the lower reaches of the western tributaries but become increasingly rolling and finally rugged and heavily wooded towards the eastern boundary.

Soils vary from the rich black earth of the Corn Belt and fertile river valleys to poorly drained claypan and shallow rocky soils of upland areas. The mountain regions of eastern Kentucky, western Pennsylvania, and West Virginia still remain extensively forest covered. The topography of the basin, generally, is well suited to recreational development, but the more adaptable undeveloped resources frequently are far removed from the centers of population.

3. Climate. The basin's climate is of a continental type with marked seasonal variations. The humidity is high. Temperatures range from lows of -35° Fahrenheit to highs of 110° Fahrenheit. January and July are the coldest and hottest months, respectively.

Cyclonic storms moving generally from west to east during the winter and early spring months follow a path through the basin. These storms produce heavy precipitation that may cause general floods on the main stem. Cloudbursts in the smaller drainage areas cause severe local flooding. Occasional droughts also have been experienced. Variations in average annual precipitation range from approximately 30 inches in the northwest portion of the basin to more than 50 inches in the southeast. Annual snowfall varies from about 10 inches in the western and southwestern portions to about 60 inches in the northeast and as high as 80 inches in southwestern New York.

The summer recreation season, in general, is considered to extend from Memorial Day to Labor Day, or 14 to 16 weeks. Occasional mild fall seasons may increase this season through mid-October, although the general recreation use during this fall period is substantially less than that during the summer season. Snowfall and extended cold periods during the winter months are adequate to permit considerable winter sports activity in the more mountainous sections of the basin.

B. Socio-economic.

1. Population.

a. General. In 1960 over 19 million people resided in 386 counties of the basin covering a total area of 161,690 square miles. (The area varies somewhat from the 163,000 square miles drainage basin due to the delineation of subarea boundaries on county lines.)

Approximately 58 percent of the basin's inhabitants in 1960 were urban dwellers, and the 21 SMSA's in the basin contained 50.3 percent of the total population. The Projective Economic Study estimates that 64.2 percent of the populace will inhabit urban areas by 1980 while 72.8 percent of the population in the year 2010 is expected to be urban. Although urbanization of the basin population is anticipated to progress at a greater rate than the Nation, the basin percent of urbanization will still be less than the National average in the target years. At the same time, the basin's portion of the conterminous U. S. population is expected to decrease to 8.4 percent by the year 2010.

The 1960 basin population is expected to increase 1.22 times by 1980 (23.1 million) and 1.66 times by the year 2010 (31.6 million). However, these population increase rates will be less than those of the Nation, i.e., 1.36 and 2.10 for 1980 and 2010, respectively. This is a significant factor in determining increases in demands for outdoor recreation opportunities in the basin since the methodology used in estimating future recreation use involved a comparison of population increase rates in the basin and the Nation.

The Projective Economic Study indicates that Subareas Q (White) and I (Scioto) are expected to show the greatest increase in percent of basin population for the 1960-2010 period. Conversely, it is anticipated that the Pittsburgh SMSA, Subarea C, will experience the greatest reduction in the share of basin population during the same 50-year period. The basin population shares generally are projected to diminish in the eastern or Appalachian subareas while increasing in the northwestern subareas.

Available data on outdoor recreation participation rates are not considered to be statistically capable of disaggregation to the subarea level. Therefore, in developing estimates of recreation demands, it was necessary to assume that each water-related outdoor recreation participation rate and the rate of increase in demand for each activity would be the same for the subareas and the basin. Because of this limiting requirement, the 1960 effective population of each subarea became the primary parameter for developing estimates of demand and indicating the differences in demand between the 19 subareas.

b. Effective Population. The effective 1960 population for the basin was determined to be 19,207,300. The effective population is considered to be the amount of people which reside within 125 miles of a study area and affect the demand for outdoor recreation resources in the study area.

The actual 1960 basin population, 19,226,200 (including Cattaraugus and Chautauga Counties in New York), and the effective population, 19,207,300 (also including the two New York counties), appear very similar. While this similarity is evident for the basin, the individual subareas display distinct variations between actual and effective populations.

The actual and effective 1960 populations of each subarea are shown in the table on the following page.

2. Economic Activities. The Ohio River Basin enjoys a highly diversified economy. Comparison of major industrial groups - agriculture (including forestry and fisheries), mining, construction, manufacturing, transportation, wholesale and retail trade, finance, services, government, and nonclassifiable - indicates that the pattern of employment in the basin is very similar to that of the Nation. Employment in manufacturing, services, and wholesale and retail trade ranked 1, 2, and 3, respectively, for both the basin and the Nation in 1960.

Employment in the services field is expected to nearly triple in the 50-year period from 1960 to 2010. Services employment in 1960 totaled 1,232,600 persons and accounted for 19.2 percent of the basin's total employed working force. Approximately 3,550,000 people are expected to be employed in the services field by the year 2010. This would represent 29.5 percent of the basin's projected total employment. The nearly three-fold rate of growth in services expected by 2010 is greater than the projected increase rate in total employment for the basin's major

Actual and Effective Subarea Populations - 1960

| <u>Subarea</u> | <u>1960 Population (1,000's)</u> | |
|-----------------------------------|----------------------------------|------------------|
| | <u>Actual</u> | <u>Effective</u> |
| A-Allegheny | 1,030.7 | 1,320.3 |
| B-Monongahela | 556.1 | 820.5 |
| C-Pittsburgh SMSA | 2,405.4 | 1,523.8 |
| D-Beaver | 864.1 | 895.1 |
| E-Upper Ohio | 700.7 | 874.9 |
| F-Muskingum | 1,040.3 | 1,457.5 |
| G-Kanawha-Little Kanawha | 899.4 | 913.4 |
| H-Ohio-Huntington | 531.7 | 503.2 |
| I-Scioto | 1,113.4 | 960.9 |
| J-Guyandot-Big Sandy-Little Sandy | 463.7 | 560.6 |
| K-Ohio-Cincinnati | 1,309.6 | 771.3 |
| L-Little Miami-Miami | 1,419.0 | 1,316.4 |
| M-Licking-Kentucky-Salt | 722.7 | 1,013.3 |
| N-Ohio-Louisville | 852.6 | 440.7 |
| O-Ohio-Evansville | 559.2 | 505.5 |
| P-Green | 393.1 | 495.7 |
| Q-White | 1,782.9 | 1,765.9 |
| R-Wabash | 1,362.4 | 1,928.3 |
| S-Cumberland | <u>1,219.2</u> | <u>1,140.0</u> |
| OHIO RIVER BASIN | 19,226.2 | 19,207.3 |

industry groups and greater than the growth rate in any other single industry category. Only three other industry groups show projected increases in shares of total employment - construction, finance, and government.

By the year 2010 the services industry is expected to be the primary user of the basin's labor force. This is considered significant in the field of outdoor recreation since recreation services fall within the services industry category. Development of recreation facilities have aided in the growth of the service industry; and with the anticipated acceleration in water resource development to meet the needs of the basin, it is expected that outdoor recreation will play an increasingly important role in the basin's economy in future years.

3. Transportation.

a. General. A detailed study of the basin's transportation network, including air, rail, waterway, and highway systems, has not been undertaken for this phase of the comprehensive survey. Although accessibility by road is considered to be the prime factor in determining travel patterns for the major portion of day and weekend recreation use, it is recognized that airline, railroad, and, in a lesser sense, waterway systems provide routes of access for tourists and vacationers.

Plane and train connections are available at major cities throughout the basin, but highway access from these cities to the recreation facilities remains the limiting factor. However, within some recreation areas, such as Rough River Dam State Park, Kentucky, landing strips are provided for private planes; thus, the areas are made more readily available to a relatively small portion of the general public.

The watercourses of the basin afford access in their own right to recreation activities inherent in the rivers themselves and to facilities developed along river banks. The Ohio River and six of its tributaries --Allegheny, Monongahela, Kanawha, Kentucky, Green, and Cumberland Rivers--offer recreation boaters access to much of the basin as a result of navigational structures erected primarily for water transport of bulk commodities.

Although these several methods of transportation are readily available, it is considered that the basin's road network affords the major means of access for outdoor recreation users.

b. Highway System.

(1) General. The entire basin is interlaced with a network of interstate, U. S., state, county, and township roads which offer access via automobile. Because of variances in topography and population concentrations, the northern and western portions of the basin are more densely intertwined with roadways than are the more rugged eastern and southern sections. State and local roads supplement the U. S. and interstate systems by offering direct access from the major highways to the recreation resources.

(2) U. S. Routes. The major U. S. routes which traverse the basin from east to west include U. S. 6, 22, 30, 33, 35, 36, 40, 50, 60, and 70. These highways afford access to recreation resources for the population within the basin and such cities outside the basin as St. Louis, Springfield, Fort Wayne, Lima, Altoona, etc. The north-south U. S. routes include U. S. 19, 21, 23, 25, 27, 41, 42, 45, 54, 62, 68, and 119, providing access within the basin and from the nearby cities of Chicago, South Bend, Toledo, Cleveland, Erie, Buffalo, Chattanooga, Knoxville, etc. These routes are an integral part of the overall road network and serve not only as main arteries of travel in some areas, but as intermediaries between the high-speed interstate routes and the state and local roads which lead directly to the recreation resources. Many of these U. S. routes are being improved under the regular Federal-aid highway program or the Appalachian development highway program.

(3) Interstate Routes. The Ohio River Basin contains a concentrated system of completed or proposed interstate highways. In the seven states which are considered to comprise the major part of the basin - Illinois, Indiana, Ohio, Pennsylvania, West Virginia, Kentucky, and Tennessee - approximately 8,090 miles of interstate roads are proposed for construction. Thus, approximately 19 percent of the

programed 40,900 miles of interstate highways for the entire conterminous United States will be contained within these seven basin states.

These figures do not include such roadways as the Western Kentucky Turnpike which is somewhat similar to the interstate routes both in design and capability for moving large numbers of people a great distance in a relatively short time. The completed system of high-speed roadways will be a major factor in transporting people from large metropolitan and urban population centers to areas offering outdoor recreation facilities. The interstate routes and the major cities which they serve are shown on Plates 2 through 8.

III. DEMAND, SUPPLY, AND NEEDS

A. Recreation Market Area. The recreation market area, or zone of influence of recreation resources in the basin, is considered to include the 386 counties in the 19 subareas delineated for this study plus the standard metropolitan statistical areas within 125 miles(±) of the basin boundaries. Twenty-three standard metropolitan statistical areas lying outside the basin were considered in determining the population affecting the area's recreation resources. These SMSA's are: Toledo, Lima, Lorain-Elyria, Cleveland, and Akron, Ohio; Erie, Altoona, Harrisburg, and York, Pennsylvania; Buffalo, New York; Roanoke and Lynchburg, Virginia; Asheville, North Carolina; Chattanooga and Knoxville, Tennessee; St. Louis, Missouri; Springfield, Decatur, Peoria, and Chicago, Illinois; and Gary-Hammond-East Chicago, South Bend, and Fort Wayne, Indiana.

The inventory of recreation supply included facilities located in an additional 107 counties in the vicinity of the basin. These facilities were inventoried merely to indicate the resource developments available in neighboring areas and no determination of needs in this included study area was attempted. This included study area does not include counties in Kentucky, North Carolina, or Tennessee since the Tennessee River Basin was excluded from the study. (The study areas are shown on Plate 1.)

B. Recreation Demand.

1. General. The total demand for water-related recreational opportunities in the Ohio River Basin is estimated at 1,029,600,000 recreation days by the year 2020. Estimates of the basin's annual recreation demands in all the target years are presented in the following tabulation.

OUTDOOR RECREATION DEMANDS

| Activity | Annual Activity Days (1,000's) | | | |
|----------------------|--------------------------------|---------|-----------|-----------|
| | 1960 | 1980 | 2000 | 2020 |
| Swimming | 113,132 | 226,990 | 481,943 | 696,892 |
| Boating | 42,448 | 103,570 | 188,894 | 273,790 |
| Water Skiing | 6,721 | 20,701 | 41,331 | 61,900 |
| Picnicking | 65,305 | 130,610 | 216,158 | 301,054 |
| Camping | 12,870 | 42,726 | 89,059 | 135,135 |
| Sightseeing | 112,748 | 297,654 | 571,632 | 846,736 |
| Nature Walks | 49,361 | 91,811 | 141,666 | 191,027 |
| Hiking | 6,914 | 22,261 | 44,870 | 67,413 |
| Total Activity Days | 409,499 | 976,323 | 1,775,553 | 2,573,947 |
| Recreation Days (M)* | 163.7 | 390.6 | 710.2 | 1,029.6 |

* Annual Recreation Days (millions) = Total Annual Activity Days/2.5
(see demand methodology).

The tabulations show that recreation demands for the target years 1980, 2000, and 2020 will approximate 2.4, 4.3, and 6.3 times, respectively, the demands in the base year, 1960. Camping, hiking, and water-skiing show the greatest increases among the eight selected activities. Nature walks and picnicking show a relatively low increase rate.

With the varying increases between activities, the ranking of the eight activities in terms of total recreation days is expected to change somewhat by 2020. Sightseeing will replace swimming as the number one activity participated in by the most people. Boating will rank fourth in total number of participants and replace nature walks in that position. All other activities would retain their 1960 ranking. These rankings and the estimated demands from which they are determined are based on present water-oriented activities, however. Advancing technology and "American ingenuity" may create new activities to supplement or replace those which have been considered in this study.

2. Methodology. The projection of demands for outdoor recreation opportunities in the Ohio River Basin utilizes 1960 participation rates and estimates of future increases in recreation use as presented by the Outdoor Recreation Resources Review Commission in Study Reports 19 and 26. The methodology is people-oriented in that the demands for recreation within a study area are determined as those demands which are created by the population affecting the study area and which could be expected to occur if facilities were made available. Latent demand (that portion of the recreation demand which is inherent in the study area population but not reflected in the present use of the area's facilities) is considered in the methodology, since it is assumed that there will be an improvement from 1960 quality and quantity of facilities available on a per capita basis. It is felt that a per capita increase in quality and quantity of facilities would provide impetus for utilization of resources by a larger portion of the population.

It should be stressed that the demands study was aimed primarily at water-related or water-enhanced general recreation activities. Recognizing the range of activities which could be construed to apply to this categorization, the field of activities was further narrowed to eight specific general recreation activities which were considered to be found at most water resource developments -- swimming, boating, water skiing, picnicking, camping, sightseeing, nature walks, and hiking. Fishing and hunting are considered in the U. S. Fish and Wildlife Service's report, Appendix G. The demands which have been estimated for the eight selected activities are potential demands which could be met through adequate development and administration if the resources are available. If the resources are not available and/or developed, the demands in one study area could conceivably overflow into any adjoining study area(s) creating an additional demand on its (their) resources. This could have an accumulative effect, particularly when considering several contiguous areas such as the 19 subareas of this study. Because of this effect, it was necessary to assume that the total estimated demands for outdoor recreation opportunities in the 19 subareas would be directed within the Ohio River Basin boundaries through adequate development and administration of basin resources.

A discussion of the demand methodology can best be undertaken by dividing the approach into its four major parts: (1) Applicable Participation Rates, (2) Effective Population, (3) Applicable Rates of Increase in Recreation Demand, and (4) Determination of Recreation Demands. A sample procedure illustrating how these major items were used in determining the demand for water skiing in Subarea D is presented in Appendix I.

a. Applicable Participation Rates. Tables 1.01, 2.01, 3.01, and 4.01 of ORRRC Study Report 19 indicate quarterly recreation activity participation rates of the 1960 population 12 years old and over residing in the four census regions of the United States. A total of twenty-four activities were listed in these ORRRC Study Report 19 tables. For the purpose of this study, ten of the activities were considered as being water-dependent or water-enhanced. Three activities - canoeing, sailing, and other boating - were combined as one so that a total of eight activities were evaluated; swimming, boating, water skiing, picnicking, camping, sightseeing, nature walks, and hiking.

Since the Ohio River Basin lies within three of the Nation's four census regions, weighted annual participation rates for each of the eight activities were determined from the ORRRC data (Study Report 19) on the basis of the portion of the 1960 basin population residing in each region. These adjusted rates were then used in conjunction with the effective subarea populations (see following section) to determine 1960 demands in each of the subareas. No attempt was made to obtain individual subarea participation rates since ORRRC regional participation rates were not considered to be statistically capable of further disaggregation to a subarea level. The adjusted annual participation rates for the basin follow:

| <u>Activity</u> | <u>Participation Rate</u> |
|-----------------|---------------------------|
| Swimming | 5.89 |
| Boating | 2.21 |
| Water Skiing | 0.35 |
| Picnicking | 3.40 |
| Camping | 0.67 |
| Sightseeing | 5.87 |
| Nature Walks | 2.57 |
| Hiking | 0.36 |

b. Effective Population. Several assumptions were necessary in order to determine the population to be used in conjunction with basin participation rates in obtaining 1960 demands. These assumptions follow:

- (1) The recreation market area of each subarea includes the subarea and all standard metropolitan statistical areas within 125 miles(±) of the subarea boundary.

(2) The SMSA's are focal points from which a high percentage of outdoor recreation demand originates.

(3) About 60 percent of outdoor recreation use occurs within 40 miles and 90 percent occurs within 125 miles (30 percent between 40-125 miles) of the point of origination if facilities are available. (SMSA's taken as origination points.)

(4) The total demand of the non-SMSA population of a subarea would be contained within the subarea. (Although it is recognized that demands of a subarea's non-SMSA population would flow to other subareas such as does the SMSA demand, the points of origination are difficult to determine. Therefore, it was assumed, for simplicity, that this non-SMSA demand would balance out between subareas.)

The 40-mile and 125-mile travel distances and the respective percentages of use occurring within these limits were developed from information presented in the California Outdoor Recreation Study. These figures were closely substantiated by the findings of Messrs. Lester G. Duck and Paul F. Beard of the U. S. Army Engineer Division, Ohio River, in their paper of October 8, 1964, entitled "Analysis of Present and Projected Outdoor Recreation Demands and Present and Planned Capacities Associated with the Wabash River Basin Comprehensive Study, Interim Report No. 2." The study by Messrs. Duck and Beard indicated that 90 percent of the visitors to Cagle's Mill and Mansfield Reservoirs, Indiana, traveled 120 miles or less, one way.

The portions of the SMSA populations which would have some effect on subarea demands were obtained by drawing 40 and 125 mile radii circles around the major cities of the SMSAs in each subarea or within 125 miles of the subarea boundaries and determining the proportional part of the area within the 40 and 40-125 mile circles which fell in the subarea. These proportional areas were then multiplied by 60 percent and 30 percent, respectively, of the SMSA population. The resulting figures were considered to represent the portion of the population in an SMSA which would affect the recreation demand within a subarea.

To this effective population of the SMSA's was added the total non-SMSA population of the subarea to determine the total effective subarea population which could be applied to the derived basin participation rates. Although, the participation rates as presented in ORRRC Study Report 19 considered only that part of the population 12 years old and over, the basin participation rates were applied to the total effective population since it was considered that those under 12 would partake in the same activities and at a similar rate as their parents.

c. Applicable Rates of Increase in Recreation Demand. In order to estimate the recreation demands for the target years 1980, 2000, and 2020, rates of increase in demands for each activity were obtained by using as a base the estimates of National percent increases by activities (with opportunity factor) provided in Table 6 of ORRRC Study Report 26.

The estimated percent changes for the 1960-1976 and 1960-2000 periods were plotted graphically for each of the eight selected activities. The percent changes for these eight activities in the years 1980 and 2010 were then determined from the graphs. (The years 1980 and 2010 were those for which population projections were provided by the Projective Economic Study.) These National demand increase rates were then converted to basin demand increase rates by comparing estimated increases in population and per capita income for the basin and the Nation. This was done on the premise that fluctuations in demand parallel closely any fluctuations in per capita income and population and are, in fact, heavily dependent upon these two factors.

Estimates of future National population, basin population, National per capita income, and basin per capita income were obtained from information given in the Projective Economic Study. Comparison of estimated increases in per capita income indicated that the basin's per capita income would increase 1.17 and 1.36 times as much as the Nation for the 1960-80 and 1960-2010 periods, respectively. Increases in the basin's population from 1960 to 1980 and from 1960 to 2010 were found to be .90 and .79 times, respectively, that of the Nation. By combining the proportionate increases in per capita income and population for each period, a factor was determined by which the estimated National demand increases could be converted to basin increases. This method indicated that the 1960-1980 demand increase in the basin would be 1.05 times that of the Nation while the 1960-2010 basin demand increase would be 1.07 times the National figure. These factors were applied to the National demand increase data for each of the eight selected activities (although it is recognized that each activity may not be equally affected by changes in population and per capita income). Thus, estimated increases in demands within the basin were determined for 1980 through 2010 for each activity.

In order to estimate the basin demand increases for the target years 2000 and 2020, it was assumed that the increases from 1980 through 2010 and 2020 would have a linear relationship. Thus, the following demand increase rates were determined for the target years.

Estimated Increase Rates in 1960 Demands*

| <u>Activity</u> | <u>1980</u> | <u>2000</u> | <u>2010</u> | <u>2020</u> |
|-----------------|-------------|-------------|-------------|-------------|
| Swimming | 2.36 | 4.26 | 5.21 | 6.16 |
| Boating | 2.44 | 4.45 | 5.45 | 6.45 |
| Water Skiing | 3.08 | 6.15 | 7.68 | 9.21 |
| Picnicking | 2.00 | 3.31 | 3.96 | 4.61 |
| Camping | 3.32 | 6.92 | 8.71 | 10.50 |
| Sightseeing | 2.64 | 5.07 | 6.29 | 7.51 |
| Nature Walks | 1.86 | 2.87 | 3.37 | 3.87 |
| Hiking | 3.22 | 6.49 | 8.12 | 9.75 |

*Determined from ORRRC as discussed above.

d. Determination of Recreation Demands. The method of approach to estimating future potential recreation demands in the designated target years required that demands first be determined for the base year 1960. This was done by applying the effective populations of each sub-area as obtained in Step 2 to the basin participation rates for each selected activity as derived in Step 1. Estimated activity days for each activity were obtained for all 19 subareas and the total basin in 1960.

The projection of future demands involved application of the individual activity demand increases developed in Step 3 to the activity demands estimated for 1960. In this way estimates of activity days for each of the eight selected activities were developed by subarea for the target years 1980, 2000, 2020.

The resultant demands were expressed in annual activity days which reflect the total use that all facilities offered for a specific activity could expect during the course of the target year. Summing up the activity days for all eight activities in each year produced total annual activity days for selected water-dependent or water-enhanced activities in each subarea. In order to convert these annual activity days into estimates of annual recreation days, it was assumed for purposes of this study that the average person would participate in 2.5 activities during a visit to an area in which the eight activities were available. Annual recreation days for each subarea were determined by dividing the estimated total annual activity days by 2.5. The estimates of annual recreation days represent potential demands which would obtain within the study area if facilities were available. Projected annual activity day and recreation day demands in the basin and each subarea are tabulated in Appendix I.

C. Recreation Supply.

1. Existing Areas. The inventory of existing recreation facilities in the Ohio River Basin was developed primarily from the Bureau's Nationwide Planning effort and included selected areas which were in operation in 1960. The inventoried recreation supply shows over 58 million recreation days were recorded at basin development in 1960. Inventoried areas were those administered by Federal, state, and local agencies. Privately developed resources were not included in the inventory since adequate information could not be readily obtained. Memorials and monuments administered by the state and local recreation areas having less than 50 acres of water were excluded from the inventory as being beyond the scope of the study and to orient the study more toward water resource developments. Tabulations of inventory data are presented in Appendix II. Locations of the inventoried existing areas are shown on Plates 9-14.

a. Available Acreage. Summarization of inventoried facilities indicates that the basin offered over four million acres of recreational lands and waters to the public in 1960. Federal developments accounted

for approximately 67 percent, state areas 30 percent, and major local areas about three percent of the total recreation acreage.

Surface area of water made up in excess of 248,000 acres or about six percent of the basin's 1960 recreational area. About 73 percent of this water surface was provided on Federal areas while 19 percent was on state lands and the remaining 8 percent in major local developments.

These comparisons of administrative units do not represent a true numerical picture of total land ownership characteristics since not all state and locally administered lands were included in the inventory. However, most of the water areas were inventoried, and the figures do show that Federal development of water resources constituted by far the major source of impounded water for recreational activities. State and local agencies have recognized the recreational drawing power of these Federal water areas by acquiring, developing, and/or administering lands adjacent to the impoundments. Recent passage of the Federal Water Project Recreation Act (P. L. 89-72) may result in an even greater participation by state and local agencies in recreational development and administration at Federal water projects.

Again, these comparisons are for the basin as a unit and do not hold true for all subareas. Large scale Federal ownership in Subareas A, B, G, M, O, and S create an imbalance which is not offset by the state and local ownerships that equal or greatly exceed the Federal lands in the majority of the subareas.

b. Attendance. Approximately 41 percent of the total 58 million recreation days recorded in 1960 occurred at Federal developments while 46 percent were listed at state administered facilities and 13 percent at major local recreational areas. Visitations to existing individual recreation areas are shown on the inventory forms of Appendix II and are summarized in Appendix I, Table III. The attendance figures show that although the greater recreational acreage is owned by Federal agencies, state developments attract more total visitors and more visitors per acre - 21 visitors per acre at state areas as compared to 9 visits per acre at Federal developments. Major local areas show a use pressure of about 66 people per acre annually.

The more intensive use of state and major local areas could be attributed largely to the fact that state and local recreational areas are developed specifically for recreation, whereas, recreational development at Federal areas - Corps of Engineers reservoirs, national forests, Soil Conservation Service watershed projects - has been incidental to one or more other project purposes. Much of the land acquired by the Federal agencies is used for primary project purposes, and recreational development of the remaining lands is not nearly as intensive as on state or local agency lands.

The inventoried major local areas lie within or near population concentrations and are more readily accessible to a large number of people.

Therefore, intensive development is required. Much of the Federal developments are further removed and relatively less accessible from the population centers.

Publicity also plays a major role in the use pressure of developed areas. State and local areas generally are much more publicized than Federal developments (with the exception of national parks and monuments).

2. Potential Areas. The inventory of potential recreation facilities in the basin was developed essentially from the same source (Bureau of Outdoor Recreation's Nationwide Plan) as was the data for existing areas. Supplemental information was obtained by field evaluations and pamphlets and data made available by the Corps of Engineers, Soil Conservation Service, and other agencies. Inventory data are tabulated in Appendix II. The locations of inventoried potential facilities are illustrated on Plates 15-20.

Approximately 1,331,000 acres of recreational lands are programed for future acquisition or have been acquired and made available for public use since 1960. If all the currently programed areas were acquired, these potential lands would increase the total 1960 inventoried acreage by 32 percent. Major local areas would more than triple in total ownership while state ownership would increase 41 percent and Federally-owned acreage would go up 21 percent.

D. Recreation Needs.

1. General. In order to develop an indication of need for additional facilities required to meet the projected recreation demands within the basin, the estimated demand in the target years were related to the facility supply available in the base year, 1960. The figures which evolved are intended primarily to indicate the increase in recreation needs which can be anticipated in the basin and to point out areas of greatest urgency for facility development. The estimates of needs in recreation days are indexes of relative needs and are not offered as a measure of the expected use which additional facilities should be capable of accommodating. It should be recognized that some activities not considered to be water-related could also be developed at areas that are primarily water-oriented; i.e., horseback riding, bicycling, etc. The basin's water-oriented outdoor recreation needs (in terms of annual recreation days use for which additional facilities should be provided) are as follow:

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|--------------------------------------|-------------|-------------|-------------|-------------|
| Annual Recreation Days (millions) | 105.4 | 332.3 | 651.9 | 971.3 |

While a general increase in facility development will be required for all of the eight selected water-related activities, construction of camping, hiking and water skiing facilities should be undertaken at an

even faster rate to offset the expected rapid expansion in demands in these activities. The geographic areas of the basin in which the recreation needs are greatest is better depicted in the evaluations of individual subareas.

2. Methodology. The recreation demands which were developed by the methodology discussed earlier in this chapter indicate the amount of use which could be expected to occur if adequate facilities for eight selected activities were made available. The inventory of recreation facility supply in the base year (see Appendix I) includes Federal areas, state areas exclusive of historical monuments, and major local areas having over 50 acres of water available. It is recognized that considerable facility supply may exist in private developments and other areas not included in the inventory. It should also be recognized that inventoried use of facilities in some cases includes visitations which are beyond the present (1960) design capabilities of the existing developments (overuse). Attempts to determine the amount of this overuse, or the percentage of total use which was actually designed for, failed due to the lack of adequate data and to a great variance between states in design standards. The inventory also includes visits to facilities for other than the eight selected activities. In spite of these recognized drawbacks and because of the unavailability of a better common base, the inventoried 1960 visitation in each subarea and the basin was utilized in conjunction with estimated demands to determine relative needs.

It is recognized that some currently programed facilities will be developed to offset a portion of the estimated recreational needs in the target years. However, the scheduling for development of these facilities cannot be adequately determined, therefore, the recreation needs were developed relative to the inventoried 1960 supply.

The relative recreation needs are necessarily presented in numbers of recreation days since inventories of use are in total annual visits, or annual recreation days, and recreation demands have been determined in recreation days as explained in the discussion of demand methodology. The recreation needs for the basin and each subarea are tabulated in Appendix I, Table IV.

IV. OUTDOOR RECREATION PLAN

A. Appraisal of Recreation Potentials. Several types of natural recreation resources are available for development throughout the basin. The forested hills of West Virginia, western Pennsylvania and eastern Kentucky offer an area of great potential for recreation development. The resources of this region are aesthetically attractive and suitable for water-related recreation development, but the area is sparsely populated and the topography which makes the region attractive also serves to limit accessibility. Intensive development of the water-related recreational resources accompanied by adequate highway construction would serve to meet much of the recreation needs in the eastern portion of the basin. Proper development of water resources would also attract users from the resource-poor population concentrations to the east.

The navigable waterways of the Ohio River Basin have been substantially deleted from this study primarily because adequate data were not available to properly evaluate the recreational use of these rivers. This lack of data was due largely to the fact that most river bank development is now privately operated and a thorough inventory of the private area was not attempted. It is considered that proper development of lands along the Ohio River and its major tributaries could alleviate a substantial portion of the basin's recreation needs; particularly in the area of boating, water skiing, swimming, picnicking, camping, and sightseeing. Such development would be greatly dependent on proper water pollution controls.

In 1963 a special Wild Rivers Study Team was appointed by the Secretaries of Interior and Agriculture to study the need for preservation and conservation of a nationwide system of wild rivers particularly suited to recreation. The rivers which the Team selected for preliminary consideration included all or one or more segments of the following rivers in the basin: Blue in Indiana, Cheat and Greenbrier in West Virginia, Cumberland in Kentucky and Tennessee, Little Wabash in Illinois, and the Youghigheny in Maryland and Pennsylvania. Although none of these rivers have yet received detailed study, the Youghigheny in Maryland and Pennsylvania is designated for study in a National Wild Rivers bill now pending in Congress. The Little Miami and Little Beaver in Ohio and the Allegheny and Clarion in Pennsylvania are also included for study in the pending bill. With this in mind, care should be taken in the selection and development of water resource areas to meet the recreation needs of the basin. Development should not be undertaken at the expense of destroying natural features which are in themselves a source of attraction and joy to the public.

In April 1964, the President's Recreation Advisory Council recommended that a National program of scenic roads and parkways be developed to provide scenic driving opportunities as part of an overall recreation program. At the Council's request, the Bureau of Public Roads of the Department of Commerce undertook a one-year study of a National program of scenic roads and parkways. The Bureau of Public Roads requested the

various states to select routes or segments of routes which might qualify in a National program. Several bills are currently pending in Congress for establishing or studying six scenic roads and parkways in the Ohio River Basin. Authorization is being sought for studying a George Rodgers Clark Recreation Way in Illinois; and for establishing the Allegheny Parkway in West Virginia, Kentucky, and Maryland; Allegheny-Cumberland Parkway in West Virginia, Kentucky, and Virginia; Lincoln Trail Memorial Parkway in Kentucky, Indiana, and Illinois; Ohio River National Parkway in Indiana; and Wabash River National Parkway in Indiana. Such a system of scenic routes, once developed, would enhance the traveler's recreation experience en route to and from recreational developments throughout the basin.

The separate states within the basin have compiled comprehensive state-wide outdoor recreation plans in conjunction with the Land and Water Conservation Fund Act of 1965. These plans include five-year action programs for acquisition and construction and should be carefully considered in determining resources to be developed for recreational use.

Local and state agencies have programed for a considerable step-up in acquiring and developing and/or administering recreational lands. The recently enacted Public Laws 88-578 (Land and Water Conservation Fund Act of 1965, 89-72 (Federal Water Project Recreation Act), and 89-117 (Housing and Urban Development Act of 1965), the Appalachian Program, the Food and Agriculture Act of 1965, and other legislation are expected to act as additional stimuli to further increases in recreational land acquisition and development by all levels of government.

Potential areas which have been programed for future development or which have been developed since 1960 will do little more than meet part (70-75 percent) of the estimated 1960 recreational needs of the basin. A much accelerated program of acquisition and development will be required to satisfy the exploding recreational needs for the target years.

B. Establishment of Goals (Resource Requirements). Adequate land, water, and facility development must be provided to meet the basin's unsatisfied demands as set forth in the preceding chapter. The multiplicity of administering agencies and organizations throughout the basin and their capabilities for providing variable degrees of recreation development precluded the establishment of a unilateral standard of resource requirements. Therefore, a range of land and water acreage requirements and development costs was developed to indicate an upper and lower limit of additional resources and funds which would be necessary to adequately meet the unsatisfied demands for water-related outdoor recreation opportunities in the basin. The resource requirements and development costs for each of the target years are illustrated in the table on the following page.

Determination of a range of requirements for land and water necessitated the development of standards of actual area required by an individual

OHIO RIVER BASIN
RESOURCE REQUIREMENTS

| <u>Year</u> | <u>Type of Development</u> | <u>Unsatisfied Demand (millions)</u> | <u>Acres Required</u> | | | <u>Development Costs (millions)</u> |
|-------------|----------------------------|--------------------------------------|------------------------|----------------------|------------------------|-------------------------------------|
| | | | <u>Land</u> | <u>Water</u> | <u>Total</u> | |
| 1960 | | 105.4 | | | | |
| | Extensive | | 853,700 | 833,700 | 1,687,400 | \$ 474.3 |
| | Intensive Average | | 170,700 426,900 | 50,600 217,100 | 221,300 644,000 | 237.2 332.0 |
| 1980 | | 332.3 | | | | |
| | Extensive | | 2,857,800 | 2,904,300 | 5,762,100 | 1,495.4 |
| | Intensive Average | | 638,000 1,428,900 | 176,100 757,600 | 814,100 2,186,500 | 747.7 1,046.7 |
| 2000 | | 651.9 | | | | |
| | Extensive | | 5,801,900 | 6,056,200 | 11,858,100 | 2,933.6 |
| | Intensive Average | | 1,160,400 2,901,000 | 365,100 1,577,600 | 1,525,500 4,478,600 | 1,466.8 2,053.5 |
| 2020 | | 971.3 | | | | |
| | Extensive | | 8,741,700 | 9,207,900 | 17,949,600 | 4,370.8 |
| | Intensive Average | | 1,748,300 4,370,800 | 563,400 2,399,100 | 2,311,700 6,769,900 | 2,185.4 3,059.6 |

for each of the eight selected activities. These standards were developed as composites or averages from several sources of information and are considered to offer optimum area for facility development. In order to apply these standards to the basin's unsatisfied demands, the unit areas were adjusted to reflect the percent of annual use which is estimated to occur in each activity for each of the target years. The standards were further adjusted to consider an internal buffer area required between facilities, the degree of development contemplated, and conversion of annual use to a design load. The several adjustments resulted in the land and water factors found in the table of resource requirements. Cost factors were determined from averages of costs for Federal, state, and local facilities offering the selected degrees of development.

C. Alternatives. Sufficient resources to meet the recreation needs of the basin could be provided by extensive development, intensive development, any combination of the two, or an average or reasonable degree of development somewhere between the two extremes.

Extensive development anticipates a large amount of buffer area (approximately 90 percent of total acquired lands) and is most indicative of Federal areas or state forest areas. Although such development is desirable in some instances, it would require acquisition of a considerable amount of land beyond that which is actually necessary to adequately accommodate the basin's unsatisfied demands. Costs would also be higher than any other development considered. Extensive development would not be recommended to satisfy the total unmet demands.

Intensive development considers facility construction on one-half the total acquired acreage. Such development would most likely occur at areas in close proximity to population centers and would be administered by local or, possibly, state agencies. Although land acquisition would be comparatively small, development of this type would provide a recreation experience of reduced quality and would not be recommended to meet the total unsatisfied demands of the basin. However, it is anticipated that the percent of total needs being met by intensive development will increase in the future due to limitations on available lands.

Average development would consist of recreation development on about 20 percent of acquired lands. It is considered that this type of development could be constructed and administered by Federal, state, or local agencies. Such development would meet the basin's total unsatisfied demands in a reasonable manner, but it should be recognized that a mixture of development types would be preferred, and, in fact, will occur in light of current programs by the various agencies.

D. Features of the Plan. The estimates of requirements for land and water to meet unsatisfied demands indicate that in the year 2020, assuming average development, approximately 4.4 million acres of land and 2.4 million acres of water will be needed in addition to that available in 1960. The inventory of potential shows a total of about

0.9 million acres of land and 0.4 million acres of water are currently programed for acquisition or development by Federal, state and local agencies. Assuming an average type development would occur on these programed areas, this would reduce the total requirements in 2020 to 3.5 million land acres and 2.0 million water acres. This total requirement could be further reduced by converting to average type development some lands now in public ownership that are less than 20 percent developed for recreation. More intensive development of existing areas would reduce the total cost of recreational development through the savings in land acquisition, but the quality of existing recreation opportunities could be adversely affected by too intensive development. Also, the amount of existing public lands which could be converted to recreation development or to more intensive development would be limited by other purposes to be served by those lands.

Development of the natural resource potentials in the northeastern portion of the basin, lands and access points along the navigable waterways of the basin, a system of wild rivers, and scenic roads and parkways throughout the basin would provide considerable recreation opportunity, but the present uncertainty of the programs and the limited scope of this study precludes an estimate of the degree to which such development would aid in satisfying the basin's unmet demands.

While Federal agencies would appear to be better capable of developing most of the water areas required in the basin, in view of current policy the responsibility for operating and maintaining sufficient land areas to accommodate the recreation need will fall mainly on state and local agencies.

Several suggested approaches to meeting the unsatisfied demands follow:

1. Single purpose water resource projects which, through maintenance of a stable pool and acquisition and development of lands solely for recreation, would make optimum use of the recreation potential of the site.
2. Greater stress on obtaining local sponsorship of recreation development on small watershed projects, particularly in the vicinity of population concentrations.
3. More development of lands and access points, i.e., old lock and dam sites and embayments at tributary junctures, along navigable waterways.
4. Recreational zoning and development of lands adjoining existing water areas, such as local water supply reservoirs, lakes, etc.
5. Restudy or, if necessary, reauthorization of existing multipurpose water resource projects to consider recreation development.
6. Setting aside of natural areas and wild rivers to preserve and protect recreation values.

7. Planning and development of highway networks between urban areas and recreation resources; development of a system of scenic roads and parkways.

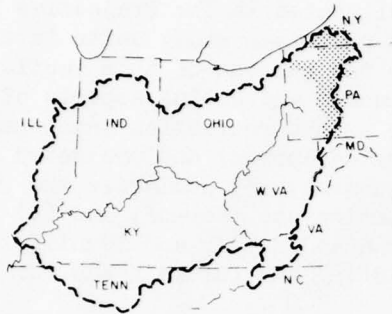
8. Coordination of the recreational programs of all public agencies planning or administering recreation facilities in the basin.

V. SUBAREA EVALUATIONS

The 19 economic subareas which were delineated in the Projective Economic Study of the Ohio River Basin were the principal study units in this comprehensive recreation study. It is the purpose of this section to: (1) identify the general physical, economic and social aspects of each subarea in light of their relationship to the recreation development of the study area, (2) identify the estimated current and projected demand for water-oriented recreation in the subarea, (3) summarize the recreation resources of the subarea and the recreation use thereof, and (4) report and analyze the imbalance between demand and supply and identify the opportunities available to satisfy existing and future needs for water-oriented recreation.

The locations of the subareas are shown on Plate 1. The subareas are also illustrated on Plates 3 through 20 which locate interstate highways and existing and potential recreation facilities in the various states and subareas. Tabulations of outdoor recreation demands, supply, and needs in the subareas are presented in Tables I through IV, Appendix I.

A. Allegheny



1. General. The Allegheny lies within western Pennsylvania and the southwestern tip of New York and roughly approximates the Allegheny River drainage basin. Encompassing 11,747 square miles (6th largest subarea) in a dozen counties of Pennsylvania and two counties in New York, Subarea A is situated in a recreationally attractive position. The populous eastern seaboard is less than one day's driving distance from

the subarea. Rugged topography, largely forested, offers an aesthetic appeal to its abundant outdoor recreation resources. The availability of both resources and people combine to make the Allegheny a key subarea in the Ohio River Basin in terms of both total demands and potential for meeting outdoor recreation needs.

Subarea A is not highly urbanized and is likely to remain more rural than the Ohio River Basin as a whole, according to the Projective Economic Study. Johnstown, the only subarea SMSA, recorded a population of 280,700 in 1960, less than 35 percent of the total subarea population (805,100). Approximately 60 percent of the total subarea population is rural.

Historically, coal mining has been a major source of economic activity in the Allegheny. During the past few decades, however, coal mining as a source of employment has steadily declined to where currently it accounts for only six percent of the labor force. Manufacturing, especially steel production in the Johnstown SMSA, has been the mainstay of the subarea economy with one-third of the labor force engaged in this activity. The entire Allegheny is experiencing a period of economic transition which is expected to continue through the next few decades. Considering the growing demand for outdoor recreation originating in eastern metropolitan centers and the largely untapped resources for this purpose in the Allegheny, the tourism-recreation industry can be expected to become an increasingly important member of the subarea's economic family.

Difficulty of access, due to rugged topographical conditions throughout the greater portion of the subarea, is a major barrier to the Allegheny becoming an outdoor recreation mecca. An accelerated program of interstate, primary, and secondary road construction is necessary if current and projected demands for recreation are to be met. Completion of I-80 will open the mid-section of the subarea to recreation. The Pennsylvania Turnpike, crossing the southernmost arm of the subarea below Johnstown, brings the east-west traveler within the general vicinity of the Allegheny's recreation resources. But north-south access to the subarea is

notably deficient. The improvement of approved routes under the Appalachian development highway program would aid in providing access in the southern portion of the subarea.

2. Recreation Demands. The subarea's estimated water-oriented outdoor recreation demand (11.2 million recreation days) for the base year 1960 was fifth highest in the Ohio River Basin. This relatively high demand for recreation opportunities in the Allegheny can be traced to the impact of metropolitan centers in or near the study area. Eleven SMSA's in the vicinity of the subarea and the Johnstown SMSA within the Allegheny account for approximately 43 percent of the effective population having an impact on subarea demands. Demand for water-oriented recreation is projected to more than double by 1980 and the estimate for 2020 exceeds six times the 1960 demand. Outdoor recreation demands in the subarea are indicated in the following tabulation:

OUTDOOR RECREATION DEMANDS

| Activity | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 7,776 | 18,351 | 33,126 | 49,900 |
| Boating | 2,918 | 7,120 | 12,985 | 18,821 |
| Water Skiing | 462 | 1,423 | 2,841 | 4,255 |
| Picnicking | 4,489 | 8,978 | 14,858 | 20,694 |
| Camping | 885 | 2,938 | 6,124 | 9,292 |
| Sightseeing | 7,750 | 20,460 | 39,292 | 58,202 |
| Nature Walks | 3,393 | 6,311 | 9,738 | 13,131 |
| Hiking | 475 | 1,530 | 3,083 | 4,631 |
| Total Activity Days | 28,148 | 67,111 | 122,047 | 176,926 |
| Total Recreation Days (millions) | 11.2 | 26.8 | 48.8 | 70.8 |

3. Recreation Supply. Displaying a wealth of outdoor recreation resources, the Allegheny ranks as the second highest subarea in the entire Ohio River Basin in terms of total visitation and is first in land and water acreages set aside to meet demands for outdoor leisure opportunities. Visitation to the subarea's inventoried facilities totaled 9.0 million in 1960 while land and water acreages which supported this visitation exceeded 895,000 acres. Six Corps of Engineers reservoirs (East Branch Clarion, Tionesta, Youghiogheny River, Mahoning Creek, Crooked Creek, and Conemaugh River) involving 5,400 acres of water accounted for 2.3 million recreation days visitation in 1960. The Allegheny National Forest is a major source of outdoor recreation activity. The forest recorded a 1960 visitation of nearly 1.2 million to 35

recreation areas and four county units. Eight state parks, six state forests, six recreation areas (State Fish Commission) and a small watershed project form the balance of inventoried outdoor recreation resources in the subarea. The 1960 inventoried visitation and land and water acreages are indicated on the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 497,226 | 398,198 | NA | 895,424 |
| Water | 6,187 | 13,177 | NA | 19,364 |
| Recreation Days (millions) | 3.6 | 5.4 | NA | 9.0 |

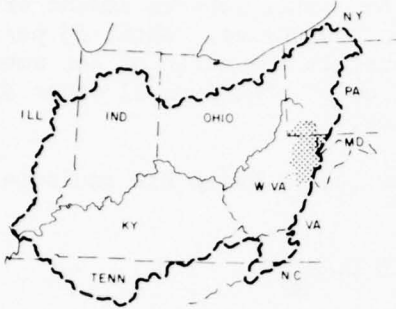
4. Recreation Needs. The estimated outdoor recreation needs for target years in the Allegheny Subarea are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 2.2 | 17.8 | 39.8 | 61.8 |

Comparisons of outdoor recreation demands (11.2 million) with supply (9.0 million) at inventoried facilities indicated a 2.2 million net need for additional outdoor recreation development for the base year. This near balance between demand and supply is largely attributed to the relatively low subarea population in relation to the number of developed recreation areas. This low net need finding for base year 1960 should not be construed as a reason to halt further recreation planning. Projected future needs in the Allegheny Subarea will require both new and expanded facilities. In addition, the Allegheny, with its abundant natural resources for outdoor recreation, is in a position to help satisfy water-oriented recreation needs in neighboring subareas, such as the Pittsburgh SMSA, where resources are relatively lacking.

B. Monongahela



1. General. This subarea roughly corresponds to the Monongahela River drainage basin. Encompassing portions of three states (West Virginia, Maryland, and Pennsylvania), Subarea B contains within its limits 6,475 square miles. Physiographically, it lies within the deeply dissected Appalachia Plateau characterized by its extensive coal fields and deeply cut river valleys. Land in public ownership suitable for supporting recreation is the

highest in the entire basin, yet both demand and existing use is relatively low. Imbalance in recreation demands and needs in adjoining subareas adds complexity to the Monongahela recreation picture.

A little more than one-half million people reside in the Monongahela Subarea. According to the Projective Economic Study, the possibilities of any substantial growth in population is slight. With the single exception of counties bordering the Pittsburgh SMSA, most of the subarea is experiencing a depressing loss of employment opportunities in resource-based industries. The subarea's inaccessibility compounds this problem. Containing no SMSA's, Subarea B's population is projected to increase only 50,000 between 1960 and 1980, one of the lowest gains in the basin. Historically, mining has been the mainstay of the Monongahela's economy. Since 1930, however, the number of workers engaged in mining has drastically declined to where it accounts for only 14 percent of the labor force today. Growth in manufacturing and services has largely offset employment losses in the mining industry. But according to the Projective Economic Study, very little growth is anticipated in either population or labor force due primarily to the subarea's relative inaccessibility and employment declines in resource-based industries. Based upon projected demands for the subarea, no great economic surge can be expected from the tourism-recreation industry unless improved transportation systems are provided to open the subarea's resources to the populous eastern market.

The primary and secondary road systems of the Monongahela subarea are inadequate to support little more than a medial recreation industry. Access problems discourage any substantial use of the subarea's resources for recreation pursuits. U. S. Highways 50 and 119 bisect the subarea, and Interstate Route 79 will aid in north-south travel, East-west travel will be augmented by the improvement of selected routes under the Appalachian development highway program.

Improvement in the water quality of the streams would improve the recreational attractiveness of the Monongahela.

2. Recreation Demand. The estimated demand for water-oriented outdoor recreation in the Monongahela Subarea for 1960 was 7.0 million recreation days. Nearly two-thirds of the total subarea demand originates within the confines of the subarea boundaries. About 25 percent can be traced to the Pittsburgh SMSA, just to the north of the subarea. The remaining demand, about 10 percent, originates from 11 other SMSA's outside the subarea, but within 125 miles.

Estimated outdoor recreation demands for target years are indicated in the following table:

OUTDOOR RECREATION DEMANDS

| Activity | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|--------------|--------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 4,833 | 11,406 | 20,588 | 29,771 |
| Boating | 1,813 | 4,424 | 8,068 | 11,694 |
| Water Skiing | 287 | 884 | 1,765 | 2,643 |
| Picnicking | 2,790 | 5,580 | 9,235 | 12,862 |
| Camping | 550 | 1,826 | 3,806 | 5,775 |
| Sightseeing | 4,816 | 12,714 | 24,417 | 36,168 |
| Nature Walks | 2,109 | 3,923 | 6,053 | 8,162 |
| Hiking | <u>295</u> | <u>950</u> | <u>1,914</u> | <u>2,876</u> |
| Total Activity Days | 17,493 | 41,707 | 75,846 | 109,951 |
| Total Recreation Days (millions) | 7.0 | 16.7 | 30.3 | 44.0 |

3. Recreation Supply. The Monongahela National Forest is a key recreation resource in Subarea B, both in terms of visitation and area of land and water for recreation. In 1960, the national forest accommodated 992,000 visitors or approximately 50 percent of the total subarea recreation use. The remaining visitation occurred at 11 state parks, five state forests, five fish and game areas, a national battlefield site, and a Corps of Engineers' reservoir. Tygart Reservoir (1,700-acre recreation pool) accommodated approximately one-half million visitors in 1960. Total inventoried visitation and land and water acreages in the Monongahela Subarea for 1960 are indicated in the following table.

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 407,946 | 103,305 | NA | 511,251 |
| Water | 3,182 | 303 | NA | 3,485 |
| Recreation Days (millions) | 1.1 | 1.4 | NA | 2.5 |

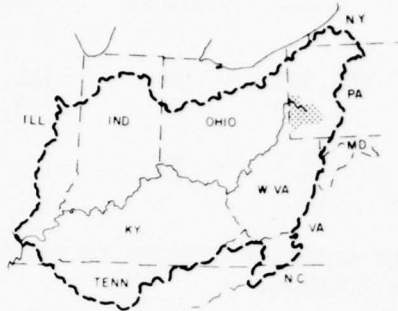
4. Recreation Needs. Projected water-oriented outdoor recreation needs for the Monongahela Subarea are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 4.5 | 14.2 | 27.8 | 41.5 |

Analysis of outdoor recreation demand (7.0 million recreation days) with supply (2.5 million recreation days) and resources (511,251 acres of land and water) at inventoried facilities in 1960 revealed an imbalance between supply and demand resulting in an approximate need to accommodate 4.5 million additional recreation days. Increased facility development can be expected to meet a major portion of current and projected needs. The Spruce Knob-Seneca Rocks National Recreation Area, as approved by Congress in 1965, will add 100,000 acres to the subarea's recreational resources. Two proposed Corps of Engineers reservoirs (Rowlesburg and Stonewall Jackson) will add a total of nearly 10,000 acres of water and will be able to support approximately 1.0 million recreators annually. Expansion and new development of six state parks, one state recreation area, two state forests, and a state fish and game area in the tri-state subarea will assist greatly in meeting unsatisfied demands. Although no estimation of visitation is available, the Wheeling Creek Watershed Project (Public Law 566), 191,180 acres of which 19,000 acres will be water, can be a major recreation attraction in the subarea.

C. Pittsburgh SMSA



1. General. The Pittsburgh Subarea lies entirely within the State of Pennsylvania and incorporates four counties which are coextensive with the Pittsburgh Standard Metropolitan Statistical Area. Although it is one of the smallest subareas (covering only 3,051 square miles), the Pittsburgh SMSA is the most populous unit in the Ohio River Basin study. It is within the boundaries of the subarea that the Allegheny and Monongahela

rivers converge to form the Ohio River. The resources of the subarea are not considered capable of satisfying the demands created by such a large metropolitan center.

Over 2,405,000 people resided in this subarea and accounted for more than 12 percent of the basin's population in 1960. Over 80 percent of the subarea's population reside in urban places. The Projective Economic Study forecasts a 10 percent population growth by 1980 and nearly a 30 percent increase by the year 2000. This growing population concentration can be expected to continue to have a profound impact on recreation planning both within and in the vicinity of the Pittsburgh SMSA.

The relatively low increase in projected population is due largely to employment declines in the subarea's primary economic activities, mining and manufacturing. Mining, once a key source of employment, is expected to engage less than one percent of the labor force by 1980. According to the Projective Economic Study, employment in trades and services will experience the greatest economic growth.

Primary transportation patterns in this subarea tend to implement the movement of recreational travelers. The Pennsylvania Turnpike crosses the subarea offering the major east-west traveler access to the subarea's limited resources, and, conversely, affords the SMSA's population access to the resources in adjoining subareas. Pittsburgh itself, serves as the hub of a system of primary and secondary roads. The major transportation problem, recreationally speaking, is how to move the potential recreator from the expressway to primary outdoor recreation complexes. A system of scenic roads and parkways originating and terminating at an expressway could be one solution to this recreation travel barrier.

2. Recreation Demand. The estimated annual demand for water-oriented outdoor recreation opportunities for the Pittsburgh SMSA subarea totaled 13.0 million recreation days in 1960. Projected demands for target years are indicated in the following table:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 8,975 | 21,181 | 38,234 | 55,286 |
| Boating | 3,368 | 8,218 | 14,988 | 21,724 |
| Water Skiing | 533 | 1,642 | 3,278 | 4,909 |
| Picnicking | 5,181 | 10,362 | 17,149 | 23,884 |
| Camping | 1,021 | 3,390 | 7,065 | 10,720 |
| Sightseeing | 8,945 | 23,615 | 45,351 | 67,177 |
| Nature Walks | 3,916 | 7,284 | 11,239 | 15,155 |
| Hiking | 548 | 1,764 | 3,556 | 5,343 |
| Total Activity Days | 32,487 | 77,456 | 140,860 | 204,198 |
| Total Recreation Days (millions) | 13.0 | 31.0 | 56.3 | 81.7 |

The 1960 estimated demand (13.0 million) was based upon an effective population of 1,523,800. The demand methodology used in this study resulted in much of the recreational demand of the Pittsburgh SMSA population being distributed to adjoining subareas. This appears logical in view of the relative unavailability of water resources within the Pittsburgh SMSA.

3. Recreation Supply. Although four state parks, a Corps of Engineers reservoir, two State Fish Commission recreation areas and a county park fall within the Pittsburgh SMSA, the subarea's total inventoried land and water area for recreation covers only 16,127 acres, second lowest in the entire Ohio River Basin. Corresponding visitation to these areas was approximately 3.3 million in 1960, also relatively low. North Park, operated by the Allegheny County Park Department, accounted for 75 percent of the 1960 subarea visitation. The remaining 25 percent occurred at the six inventoried state areas and the Loyalhanna Reservoir. Total land and water acreages and visitation in Subarea C for the base year 1960 were as follows:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 3,600 | 10,267 | 2,260 | 16,127 |
| Water | 250 | 346 | 87 | 683 |
| Recreation Days (millions) | 0.1 | 0.7 | 2.5 | 3.3 |

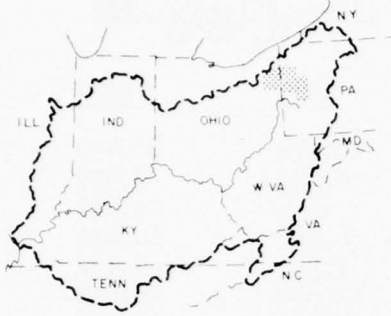
4. Recreation Needs. Comparisons of estimated outdoor recreation demands (13.0 million recreation days) with existing use (3.3 million) in 1960 at inventoried facilities in the Pittsburgh SMSA indicated that only 25 percent of the total estimated demands was being met. This imbalance between demand and supply (9.7 million need) is one of the largest in the basin and can be directly traced to the relative scarcity of developed land and water acreages for water-oriented recreation pursuits. The current and projected needs for target years are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 9.7 | 27.7 | 53.0 | 78.4 |

An inventory of potential sites programed for construction indicates that these new facilities will fall far short of meeting even current needs. Programed facilities include a 1,500-acre state park with 100 acres of water, a yet unnamed 2,275-acre park planned by the Washington County Planning Commission, an unnamed 300-acre park by the Westmoreland County Recreation Commission, and two Soil Conservation Service watershed projects (a 50-acre lake on Harmon Creek and a 200-acre lake on Cross Creek). It is readily apparent that a relatively large portion of the projected unmet need must be directed at recreation sites outside the subarea. The Allegheny, Monongahela, and Kanawha-Little Kanawha Subareas can be expected to absorb some of the Pittsburgh needs if adequate facilities and access are provided.

D. Beaver



1. General. Covering a total of only 2,881 square miles in portions of Ohio and Pennsylvania, Beaver is the smallest subarea in the Ohio River Basin. Located in the headwaters of the Beaver River, the population of the highly industrialized Subarea D is third highest in the basin. The Mahoning and Shenango Rivers converge near the southern border of the subarea to form the Beaver River. Extensive manufacturing abutting the river,

and the resulting pollution, has made the Beaver and its tributaries largely unsuited for recreation.

The Beaver's 864,100 inhabitants in 1960 represent less than five percent of the total basin populace. The Youngstown-Warren SMSA, located in two of the five subarea counties, contained nearly 60 percent of the total Beaver population. The Projective Economic Study forecasts the subarea population to increase about 12 percent by 1980 and approximately 36 percent by the year 2000.

Manufacturing, especially production of steel, has historically held the key to the Beaver's economic welfare. In 1960 it accounted for 44 percent of the labor force. Projected declines in metals employment in the subarea during the next two decades is expected to be offset by increases in machinery sectors. Projected outdoor recreation demands for the subarea indicate no revolutionary trends in the economic impact of the tourism-recreation industry. However, the close proximity of the Beaver Subarea to large metropolitan centers warrants further investigation of the recreation market for economic welfare of the subarea.

The transportation corridors which serve the Beaver's industrialized complex also afford access to recreational areas within the subarea.

2. Recreation Demand. The estimated annual outdoor recreation demand for water-oriented leisure pursuits in 1960 was 7.6 million recreation days. This demand is projected to reach 18.2 million by 1980 and exceed 48.0 million by the year 2020. Roughly 60 percent of the Beaver Subarea's demand originates in standard metropolitan statistical areas within the subarea's zone of influence (125 miles). The Beaver's single SMSA accounts for about 17 percent of the total demand while 11 SMSA's in adjoining subareas were the source of 43 percent. The remaining 40 percent can be traced to the subarea population outside the Youngstown-Warren SMSA. Estimates of annual demand for target years are indicated in the table on the following page.

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|--------------|--------------|--------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 5,272 | 12,442 | 22,459 | 32,476 |
| Boating | 1,978 | 4,826 | 8,809 | 12,758 |
| Water Skiing | 313 | 964 | 1,925 | 2,883 |
| Picnicking | 3,043 | 6,086 | 10,072 | 14,028 |
| Camping | 600 | 1,992 | 4,152 | 6,300 |
| Sightseeing | 5,254 | 13,870 | 26,638 | 39,458 |
| Nature Walks | 2,300 | 4,278 | 6,601 | 8,901 |
| Hiking | <u>322</u> | <u>1,037</u> | <u>2,090</u> | <u>3,140</u> |
| Total Activity Days | 19,082 | 45,495 | 82,739 | 119,944 |
| Total Recreation Days (millions) | 7.6 | 18.2 | 33.1 | 48.0 |

3. Recreation Supply. Outdoor recreation opportunities for the highly industrial centers of the subarea have increased during the last two decades. The completion of the 7,300-acre Mosquito Creek Reservoir by the Corps of Engineers in 1944 introduced the region to recreational opportunities at manmade impoundments. During 1960, over 554,000 people visited the reservoir and an additional 266,600 took advantage of recreation facilities provided by the Trumbull County Metropolitan Park adjoining the reservoir. Mill Creek Park, another major local area, accommodates approximately one million visitors annually while the balance of subarea visitation occurs at two fish and wildlife areas in Ohio, and a state park and State Fish Commission recreation area in Pennsylvania. The following chart summarizes the subarea's existing resources and 1960 visitation:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 11,200 | 7,362 | 2,383 | 20,945 |
| Water | 7,300 | 115 | 200 | 7,615 |
| Recreation Days (millions) | 0.5 | (0.03) | 1.3 | 1.8 |

4. Recreation Needs. Comparisons of estimated demand (7.6 million recreation days) with visitation at inventoried facilities in the Beaver Subarea (1.8 million) reveals an unmet need of 5.8 million recreation

days. Less than 25 percent of the subarea's estimated demand was being met in 1960. Projection of recreation needs indicates the following increases for target years.

OUTDOOR RECREATION NEEDS

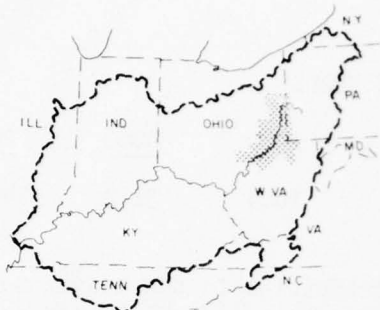
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 5.8 | 16.4 | 31.3 | 46.2 |

An inventory of potential recreation opportunities in the Beaver Subarea discloses several projects of major significance in meeting both subarea and basin needs. The Lake Erie-Ohio River Canal, if authorized, would create a reservoir of over 66,000 acres capable of accommodating an estimated annual visitation of 20,000,000. If constructed, this facility can be expected to satisfy a substantial portion of the subarea's recreation needs.

The recently completed 3,560-acre Shenango Reservoir in Mercer County, Pennsylvania, is expected to satisfy more subarea needs, approximately 225,000 visitors annually. Two state parks, a fish and game area, and a watershed project round out the inventoried potential recreation areas designed to meet part of the estimated needs. The watershed project, the 1700-acre Sandy Creek impoundment, will be capable of accommodating 200,000 people annually according to Soil Conservation Service estimates.

The greater portion of the imbalance between supply and demand, currently and in the future, will be probably alleviated if the Lake Erie-Ohio River Canal project is constructed. Otherwise, it will be necessary for residents of the Beaver Subarea to seek future outdoor recreation opportunities in adjoining subareas.

E. Upper Ohio



1. General. Subarea E embraces a 15-county area in the upper reaches of the Ohio River (six counties in Ohio and nine counties in West Virginia). The northern arm of this 5,010 square mile subarea is largely coextensive with the Upper Ohio's two SMSA's, Wheeling and Steubenville-Weirton. The development of the subarea closely corresponds with the resources and transportation corridor of the Ohio River valley. Current outdoor recreation activities are

largely centered along the lower reaches of tributaries which empty into the mainstem of the Ohio River within subarea boundaries.

The Upper Ohio's 700,700 inhabitants in 1960 represented less than four percent of the total basin populace. Approximately 56 percent of the subarea population is classified as urban, residing primarily within the two SMSA's. According to the Projective Economic Study, the steel-manufacturing centers of Wheeling and Steubenville-Weirton are not expected to experience any significant growth. Projected population increases for the subarea are relatively low. The study indicates a six percent population increase by 1980 and a 22 percent gain by the year 2000.

Manufacturing, primarily steel, is the leading source of employment and economic activity in the Upper Ohio. Roughly 35 percent of the labor force is engaged in this activity at the present time. The trades and services category accounts for an additional 35 percent of the total labor force of 231,600. Economic expansion in the subarea is projected to largely occur downstream from the two SMSA's. Likewise, any tourism-recreation expansion will occur primarily in these downstream counties. Growth in the outdoor recreation industry can be expected to assist in establishing a more diversified economy in the Upper Ohio.

As in most river-dominated regions, the Upper Ohio's transportation network closely corresponds with the Ohio River valley corridor. I-79 roughly follows this north-south traffic pattern joining the Wheeling and Charleston SMSA's. I-70 serves Wheeling and the subarea in its east-west traffic pattern. As new recreation sites are developed the need for improvement of secondary roads to serve the recreator will become increasingly evident. The improvement of certain routes approved for the Appalachian development highway program will provide better access for recreation.

2. Recreation Demand. The estimated demand for water-oriented outdoor recreation in the Upper Ohio Subarea nearly equaled its neighboring subarea to the north (Beaver) during 1960. Less than five percent of the total Ohio River Basin demand, or approximately 7.5 million recreation days, was accounted for by the subarea in that year. This demand is projected to more than double by 1980 and reach 46.9 million by the year 2020. Of the total subarea demand, only 12 percent originates from the Wheeling and Steubenville-Weirton SMSA's and 40 percent from the remainder of the Upper Ohio Subarea. A large percent of the demand originates at 14 SMSA's adjoining the subarea.

Projected demands for target years follow:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|--------------|--------------|--------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 5,153 | 12,161 | 21,952 | 31,742 |
| Boating | 1,934 | 4,719 | 8,606 | 12,474 |
| Water Skiing | 306 | 942 | 1,882 | 2,818 |
| Picnicking | 2,975 | 5,950 | 9,847 | 13,715 |
| Camping | 586 | 1,946 | 4,055 | 6,153 |
| Sightseeing | 5,136 | 13,559 | 26,040 | 38,571 |
| Nature Walks | 2,248 | 4,181 | 6,452 | 8,700 |
| Hiking | <u>315</u> | <u>1,014</u> | <u>2,044</u> | <u>3,071</u> |
| Total Activity Days | 18,653 | 44,472 | 80,878 | 117,244 |
| Total Recreation Days (millions) | 7.5 | 17.8 | 32.4 | 46.9 |

3. Recreation Supply. Approximately 85 percent of the outdoor recreation activity at inventoried facilities in the Upper Ohio occurred at seven state parks and a Corps of Engineers' reservoir. The Corps' reservoir, Tom Jenkins, also serves the Burr Oak State Park and portions of Wayne National Forest. Total visitation at this recreation complex was 1.2 million in 1960. A total of 44,611 acres of inventoried land and water for recreation was recorded that same year, half of which fell within the boundaries of Wayne National Forest. Four state forests and nine fish and game areas round out the state-owned recreation resources in the subarea. Oglebay Park in Wheeling, the single inventoried major local area, covers over 1,000 acres and is considered by many the finest park of its kind in the country. The 1960 inventoried land and water acreages and visitation for Subarea E are indicated in the table on the following page.

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 24,198 | 19,363 | 1,050 | 44,611 |
| Water | 709 | 973 | NA | 1,682 |
| Recreation Days (millions) | 0.7 | 1.0 | NA | 1.7 |

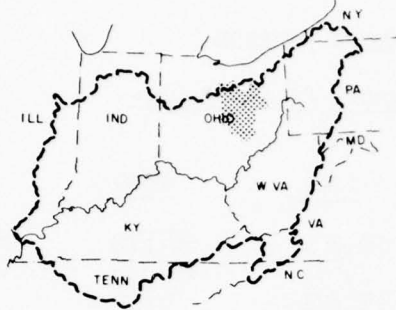
4. Recreation Needs. The Upper Ohio Subarea is experiencing a sizeable imbalance between outdoor recreation supply and demand. Comparison of the estimated demands with inventoried facilities in the subarea revealed an unmet need of 5.8 million recreation days in 1960. Projected needs for water-oriented recreation opportunities are indicated in the following table for planning target years:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 5.8 | 16.1 | 30.7 | 45.2 |

An analysis of inventoried potential outdoor recreation projects disclose that these facilities will fall short of meeting even the 1960 needs. The 1,550-acre Federal Creek Reservoir, tentatively considered for Athens County, Ohio, is estimated to be capable of accomodating approximately 600,000 visitors annually. Expansions and new development at three state parks, two state forests, and three fish and wildlife areas in Ohio can be expected to satisfy upwards of one-half million visitors annually. But the residents of the Upper Ohio will need to seek out recreation opportunities in adjoining subareas in the future unless the Land and Water Conservation Fund, the Appalachian Act, and other similar programs stimulate planning and construction of additional recreation sites with water-oriented leisure opportunities.

F. Muskingum



1. General. Subarea F lies entirely within the State of Ohio and encompasses 7,965 square miles, most of which falls in the Muskingum River drainage basin. The 16 east-central Ohio counties comprising the subarea are approximately 50 percent urbanized and also heavily industrialized. Physiographically, the subarea is located on the western borders of the Allegheny Plateau. From the standpoint of outdoor recreation, the manmade reservoirs of the

Muskingum Conservancy District are currently the major focal points for meeting demands for water-oriented leisure opportunities.

The Muskingum's 1,040,300 inhabitants (1960) represent about 5.5 percent of the basin's populace. The Canton SMSA falls within the subarea and accounts for less than a third of Muskingum's population. Although only one SMSA is within the subarea, 17 SMSA's within 125 miles of the subarea boundary offer a truer indication of population impact, recreationally speaking. Population projections reveal a continuation of the growth rate experienced in the past decade. By 1980 the population of Subarea F is projected to reach 1,326,070, or approximately a 30 percent increase in 20 years.

Manufacturing is the chief source of economic activity in the Muskingum Subarea, accounting for nearly 40 percent of the labor force in 1960. Agriculture, on the decline for some time, now accounts for less than six percent of the total subarea employment. No accurate measure of the recreation-tourism market's impact on the economy is available.

The Muskingum Subarea contains a network of primary and secondary roads which generally complement outdoor recreation development. The completion of I-70 (east-west) and I-77 (north-south) will further enhance recreational travel and access. A system of scenic roads and parkways would serve the recreation market by providing improved accessibility (especially in the Muskingum Conservancy District's reservoir region) and by satisfying much of the sightseeing demands.

2. Recreation Demand. Demand for water-oriented recreation opportunities in the Muskingum Subarea ranks fourth highest among the 19 subareas in the Ohio River Basin. The relatively high demand (12.4 million recreation days in 1960) in this subarea can be directly traced to the Muskingum's high effective population. Approximately 44 percent of the demand originates from 17 SMSA's within 125 miles of the subarea's boundary and eight percent from the Canton SMSA within the subarea. The remaining 48 percent can be traced to the

Muskingum non-SMSA populace. Estimated demands for target years are shown below:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> | | | |
|-------------------------------------|-----------------------------|--------------|--------------|--------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 8,585 | 20,261 | 36,572 | 52,884 |
| Boating | 3,221 | 7,859 | 14,333 | 20,775 |
| Water Skiing | 510 | 1,571 | 3,136 | 4,697 |
| Picnicking | 4,956 | 9,912 | 16,404 | 22,847 |
| Camping | 976 | 3,240 | 6,754 | 10,248 |
| Sightseeing | 8,556 | 22,588 | 43,379 | 64,256 |
| Nature Walks | 3,746 | 6,968 | 10,751 | 14,497 |
| Hiking | <u>525</u> | <u>1,690</u> | <u>3,407</u> | <u>5,119</u> |
| Total Activity | 31,075 | 74,089 | 134,736 | 195,323 |
| Total Recreation Days (millions) | 12.4 | 29.6 | 53.9 | 78.1 |

3. Recreation Supply. The 14-reservoir recreation complex of the Muskingum Conservancy District offers 63 percent of the subarea's current land and water available for water-oriented recreation pursuits. These same reservoirs accounted for an annual visitation of 1,750,500 in 1960. The remaining resources available to satisfy existing demand are found in two county units of the Wayne National Forest (as reported in the Nationwide Plan), three state parks, three state forests, and 14 state fish and wildlife areas. The 1960 inventoried land and water acreages and visitation for Subarea F are indicated in the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 18,588 | 33,590 | 101,613 | 153,791 |
| Water | NA | 1,472 | 15,740 | 17,212 |
| Recreation Days (millions) | (0.1) | 1.0 | 1.8 | 2.8 |

4. Recreation Needs. Comparisons of estimated water-oriented outdoor recreation demands (12.2 million) with existing use (2.8 million)

at inventoried facilities during 1960 reveal that the Muskingum Subarea is one of the areas of greatest need in the entire Ohio River Basin. The high imbalance between demand and supply (9.6 million need) is largely attributed to the high population concentrations within the subarea zone of influence. While existing facilities are substantial, development of additional facilities could attract visitors from the several SMSA's in the vicinity of the subarea. Projected needs for target years recorded in recreation days are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 9.6 | 26.8 | 51.1 | 75.3 |

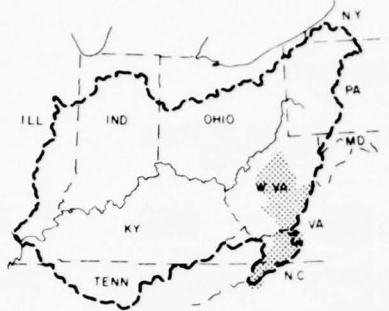
A substantial number of Corps of Engineers reservoirs have been considered for construction in this subarea. If constructed, these projects can be expected to meet a considerable portion of the unmet needs. These reservoir projects and estimated visitations are as follows:

| <u>Reservoir Project</u> | <u>Seasonal Pool (acres)</u> | <u>Projected Visitation (recreation days)</u> |
|--------------------------|----------------------------------|---------------------------------------------------|
| Frazeyburg | 970 | NA |
| Utica | 1,900 | 300,000 |
| Raccoon Creek | 340 | 81,000 |
| Conser Run | 158 | 60,000 |
| Hugle Run | 235 | 1,800,000 |
| Middle Branch | 290 | 180,000 |
| Muddy Fork | 320 | 42,000 |
| Still Fork | 300 | 36,000 |
| Lake Fork | 425 | NA |

The Dillon Reservoir, a 1,330-acre impoundment constructed by the Corps of Engineers since 1960, accommodates over one-quarter million visitors annually. Additions planned for the Wayne National Forest, two state parks, two state forests, three state fish and wildlife areas, and two county reclamation areas (as reported in the Nationwide Plan) are expected to provide new water-oriented recreation opportunities in the subarea. The Chippewa and West Fork Duck Creek watershed projects, 24 and 195 acres, respectively, are projected to satisfy a total of 102,250 recreation days annually.

In spite of these ambitious programs by Federal, state, and local agencies, the development of inventoried potentials will fall short of meeting the estimated needs. Interaction between subareas could tend to equalize recreation needs, but demand exceeds supply in adjoining subareas also. The Muskingum Subarea will require further detailed study in order to solve this problem of unmet demands.

G. Kanawha-Little Kanawha



1. General. Third largest subarea in the Ohio River Basin, the Kanawha covers 13,953 square miles in portions of West Virginia, Virginia, and North Carolina. The subarea embraces the drainage basins of two major Ohio River tributaries, the Kanawha and Little Kanawha Rivers. The rugged topography characteristic of this part of the Appalachian Plateau complements the bountiful natural resources of the subarea.

Subarea G is not highly urbanized as is common in the subareas in northern portions of the Ohio River Basin. With one exception (Subarea J) the Kanawha has the lowest percent of urbanized population in the basin, less than 31 percent in 1960. The subarea's population, about 900,000 in the 1960 base year, is projected to increase 18 percent by 1980. Charleston, West Virginia, located in the northwestern corner of the subarea, is the lone SMSA and accounts for over 90 percent of Kanawha's urban population.

Manufacturing (centered in the Charleston SMSA) constitutes the primary source of economic activity and employment. During 1960 more than 24 percent of the labor force was engaged in the manufacturing industries. Mining, historically an important sector of the subarea's economy, has declined over 50 percent since 1940 as a source of employment. Completion of several proposed reservoirs, along with accelerated public work's program of recreational character in depressed areas, could be expected to contribute to the economic welfare of the Kanawha Subarea in future years.

Problems of adequate access to the subarea in general and individual resources in particular have hampered outdoor recreation development in the Kanawha. Highway construction as proposed under the Appalachia program can be expected to alleviate this problem to some degree. A system of scenic roads and parkways warrants detailed investigation as a possible solution to this access problem as well as for opening new opportunities for the tourism industry to assist in reducing the economic depression of the region.

2. Recreation Demand. The demand for water-oriented outdoor recreation opportunities in the Kanawha totaled 7.8 million recreation days in 1960. Estimates of demands are closely correlated with the total effective population of the subarea. In the Kanawha Subarea, more than in most of the Ohio Basin units, a low effective population exists from SMSA's within the subarea and adjoining subareas and a relatively high effective population is recorded for non-SMSA portions of the Kanawha. Estimated demands in the target years, expressed in both

activity days and recreation days, are indicated in the following tabulation:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|--------------|--------------|--------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 5,380 | 12,697 | 22,919 | 33,141 |
| Boating | 2,019 | 4,926 | 8,984 | 13,022 |
| Water Skiing | 320 | 986 | 1,968 | 2,947 |
| Picnicking | 3,106 | 6,212 | 10,281 | 14,319 |
| Camping | 612 | 2,032 | 4,235 | 6,426 |
| Sightseeing | 5,362 | 14,156 | 27,185 | 40,269 |
| Nature Walks | 2,347 | 4,365 | 6,736 | 9,083 |
| Hiking | <u>329</u> | <u>1,059</u> | <u>2,135</u> | <u>3,208</u> |
| Total Activity Days | 19,475 | 46,433 | 84,443 | 122,415 |
| Total Recreation Days (millions) | 7.8 | 18.6 | 33.8 | 49.0 |

3. Recreation Supply. A wealth of natural resources capable of supporting outdoor recreation facilities ranks the Kanawha second in the Ohio River Basin in terms of total land and water area available for meeting the leisure demand of the public. Over 680,000 acres of recreational lands have been inventoried for the purpose of this study. Nearly 90 percent of this falls within the boundaries of Federal resource managing agencies; namely, the Monongahela, Cherokee, Jefferson, and Pisgah National Forests, Sutton and Bluestone Corps of Engineers Reservoirs, and the Blue Ridge Parkway administered by the National Park Service. The two Corps reservoirs accommodated 1,386,000 visitors during 1963 and amply give evidence of the potential use of artificial impoundments in the Kanawha Subarea. In addition to Federal resource areas, the states within the subarea provide outdoor recreation opportunities in a variety of settings. In total, thirteen state parks, four state forests, three state fish and game areas, and two major local areas are found in the 30-county tri-state subarea. The 1960 inventoried visitation and land and water area for Subarea G are as follows:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 610,494 | 69,602 | 1,437 | 681,533 |
| Water | 4,971 | 278 | 50 | 5,299 |
| Recreation Days (millions) | 3.6 | 1.1 | NA | 4.7 |

4. Recreation Needs. Comparisons of outdoor recreation demands (7.8 million recreation days) with supply (4.7 million) indicated that approximately 60 percent of estimated demand for water-oriented recreation opportunities in the Kanawha was being met at inventoried facilities in 1960. The unmet need is among the lowest in the Ohio River Basin. Analysis of the inventory of potential recreation areas suggest that the 1960 needs and a portion of projected needs can be met if those potentials become a reality. Six proposed Corps of Engineers reservoirs (Burnsville, West Fork, Leading Creek, Summersville, Birch, and Moores Ferry) are capable of providing in excess of 6,200 additional acres of water for recreation purposes. Four of these sites (excluding Moores Ferry and Birch) are projected to accommodate a total annual visitation of 1,150,000. In addition, expansion or new development at nine state parks, five state forests, and five fish and game areas can be expected to help alleviate future needs within the Kanawha Subarea.

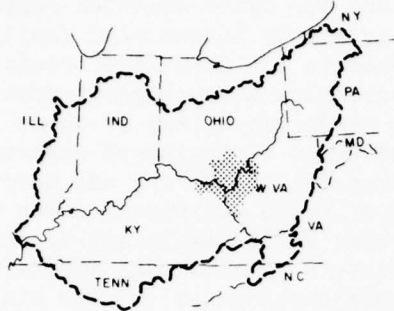
The estimated outdoor recreation needs for target years in the Kanawha are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 3.1 | 13.9 | 29.1 | 44.3 |

Due to the abundance of recreational resources in this region, an accelerated program of development should be considered in the subarea to aid in alleviating some of the need from nearby subareas and from the population centers to the east where resources are relatively lacking. Any development of recreation facilities, however, would require substantial construction of primary and secondary roads to connect the population centers with the resources. The Appalachian development highway program will aid significantly in this regard.

H. Ohio-Huntington



1. General. The Huntington Subarea encompasses a 14-county area in the States of Ohio, Kentucky, and West Virginia. The subarea's topography generally complements the development of natural resources for recreation purposes. The presence of 195,569 acres of public recreation lands and waters in the 5,916 square mile subarea is ample evidence of the attractiveness of the subarea's physical setting for recreation.

Almost half of the 531,700 inhabitants of Subarea H reside within the Huntington-Ashland SMSA. In spite of this, the total level of urbanization is considerably below that of the Ohio River Basin as a whole. According to the Projective Economic Study, a continued out-migration is expected to slow the rate of population growth during the next two decades. Projected population for 1980 is 599,000 or roughly a 13 percent increase over the 20-year period.

As is true in most of the Ohio River Basin's subareas, agriculture in the Huntington Subarea continues to decline as a source of employment while manufacturing experiences steady growth. The recreation-tourism industry can be expected to contribute a greater share to the total subarea economic activity if provisions are made to meet projected demands for water-oriented outdoor recreation opportunities.

Difficulty of access, due to rugged topographic conditions in portions of the subarea, creates a barrier to extensive recreation development in the Huntington Subarea. Travel patterns tend to follow the course of the Ohio River. Interstate 77 will skirt the subarea to the east in its north-south course. A wealth of potential scenic resources is available within the subarea, opening the door to a system of scenic roads and parkways on secondary roads.

2. Recreation Demand. The estimated 1960 water-oriented outdoor recreation demand (4.3 million recreation days) ranks the Huntington Subarea sixteenth among the 19 subareas in the Ohio River Basin. This relatively low demand can be traced to the low effective population of the subarea (503,200). Approximately 20 percent of the subarea's estimated demand originated within the Huntington-Ashland SMSA. An additional 25 percent came from 12 SMSA's within 125 miles of the subarea's limits. Demand is projected to increase over two times by 1980 and reach 27.0 million recreation days by the year 2020. Outdoor recreation demands in the Huntington Subarea for target years are shown in the table on the following page.

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|--------------|--------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 2,964 | 6,995 | 12,627 | 18,258 |
| Boating | 1,112 | 2,713 | 4,948 | 7,172 |
| Water Skiing | 176 | 542 | 1,082 | 1,621 |
| Picnicking | 1,711 | 3,422 | 5,663 | 7,888 |
| Camping | 337 | 1,119 | 2,332 | 3,538 |
| Sightseeing | 2,954 | 7,798 | 14,977 | 22,184 |
| Nature Walks | 1,293 | 2,405 | 3,711 | 5,004 |
| Hiking | <u>181</u> | <u>583</u> | <u>1,175</u> | <u>1,765</u> |
| Total Activity Days | 10,728 | 25,577 | 46,515 | 67,430 |
| Total Recreation Days (millions) | 4.3 | 10.2 | 18.6 | 27.0 |

3. Recreation Supply. Approximately 1.4 million visits, or 85 percent of the total recreation use of the Huntington Subarea, occurs at seven state parks. The balance of visitation takes place at units of Wayne National Forest, eight state forests, seven fish and wildlife areas, and a Corps of Engineers lock and dam. Public land and water available for recreation, 195,000 acres (two-thirds of which is under state management), ranks this subarea eighth in the Ohio River Basin. The 1960 inventoried visitation and land and water acreages are indicated on the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 61,023 | 134,235 | 311 | 195,569 |
| Water | 10,466 | 1,675 | NA | 12,121 |
| Recreation Days (millions) | 0.1 | 1.6 | NA | 1.7 |

4. Recreation Needs. The Huntington Subarea's water-oriented recreation need (2.6 million recreation days in 1960) is a product of the imbalance between demand (4.3 million) and supply (1.7 million) at inventoried facilities. Projected needs for the subarea for target years are indicated in the table shown on the following page.

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 2.6 | 8.5 | 16.9 | 25.3 |

Tabulation of the inventory of potential recreation areas within the Huntington Subarea indicates a total of 128,499 acres, 4,505 of which are potential recreational waters. These additions are located in three units of the Wayne National Forest, five state parks, seven state forests, five fish and game areas, and two Corps of Engineers reservoirs. The reservoirs, East Lynn and Beech Fork, will accommodate an estimated 400,000 persons according to estimated capacity programed by the Corps. These potential areas can be expected to satisfy the unmet demand identified for the base year 1960. However, additional planning is required in view of projected outdoor recreation needs identified in this study.

I. Scioto



1. General. The Scioto Subarea covers an area of 6,227 square miles in central Ohio. The Scioto River flows eastward and southward within the subarea and empties into the Ohio River at Portsmouth (in Subarea H). Subarea I falls in three distinct topographical regions and offers a diversity of resources for meeting outdoor recreation needs. The upper reaches of the subarea's drainage basin is characterized by a flat, poorly drained plateau. The Scioto

River and its tributaries cut deep valleys in the subarea's midsection. The lower reaches of the Scioto below Columbus are characterized by broad flood plains with rich farmlands. Although no natural lakes are found in the subarea, artificial impoundments are prevalent. These serve multiple purposes, including outdoor recreation.

The 1960 population of the Scioto Subarea was 1,113,400 persons. Population density averages 179 persons per square mile with greatest population concentrations occurring in the subarea's lone SMSA, Columbus. Population projections for this 13-county area reveal that 1,561,300 persons would reside in the Scioto by 1980, a 40 percent growth in 20 years.

Early development of the subarea was primarily due to the agricultural potential of the Scioto River drainage basin. Abundant natural resources also made industrial growth possible.

Today, declining employment in agriculture is being offset by substantial increases in manufacturing. The excellent transportation system of the Scioto not only complements movement of raw materials and manufactured goods, but also opens the subarea's outdoor recreation resources to the large metropolitan centers of the Ohio River Basin.

The Scioto Subarea is accessible from large metropolitan centers within the midwest by air, railroad, and a well-developed network of Federal and state highways. Columbus is the hub of this network which serves 18 SMSA's within 125 miles of the subarea. With intersubarea access problems largely removed as a barrier to recreation travel, concentrated efforts can be directed toward improving access to individual resource sites. A system of scenic roads and parkways could contribute toward this end as well as provide a recreation experience in themselves.

2. Recreation Demand. The estimated water-oriented outdoor recreation demand (8.2 million recreation days) for the base year 1960 was eighth highest among the 19 basin subareas. This demand for water-oriented recreation opportunities can be largely traced to the impact

of metropolitan centers in or near the subarea. The Columbus SMSA's effective population accounted for approximately 35 percent of the total demand. About 45 percent originated within the non-SMSA portion of the subarea. The remaining 20 percent of the demand originated from 18 SMSA's adjoining the Scioto Subarea. Outdoor recreation demands expressed in both activity days and recreation days, are indicated in the following tabulation:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 5,660 | 13,358 | 24,112 | 34,866 |
| Boating | 2,124 | 5,182 | 9,452 | 13,700 |
| Water Skiing | 336 | 1,035 | 2,066 | 3,094 |
| Picnicking | 3,267 | 6,534 | 10,814 | 15,061 |
| Camping | 644 | 2,138 | 4,456 | 6,762 |
| Sightseeing | 5,640 | 14,890 | 28,595 | 42,356 |
| Nature Walks | 2,470 | 4,594 | 7,089 | 9,559 |
| Hiking | 346 | 1,114 | 2,245 | 3,374 |
| Total Activity Days | 20,487 | 48,845 | 88,829 | 128,772 |
| Total Recreation Days (millions) | 8.2 | 19.5 | 35.5 | 51.5 |

3. Recreation Supply. State outdoor recreation facilities dominate existing programs to meet leisure demands in the Scioto Subarea. Eight state parks, three state forests, and eight state fish and wildlife areas scattered throughout the subarea accounted for 92 percent of the recreation use and 65 percent of land and water acreages available at inventoried facilities in the Scioto in 1960. Federal facilities for outdoor recreation include a 1300-acre Corps of Engineers' reservoir (Delaware), a national monument (Mound City Group), and units of the Wayne National Forest. The total 1960 inventoried visitation and land and water acreages for the Scioto Subarea are indicated in the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 26,999 | 48,719 | NA | 75,718 |
| Water | 1,302 | 6,177 | NA | 7,479 |
| Recreation Days (millions) | 0.4 | 4.3 | NA | 4.7 |

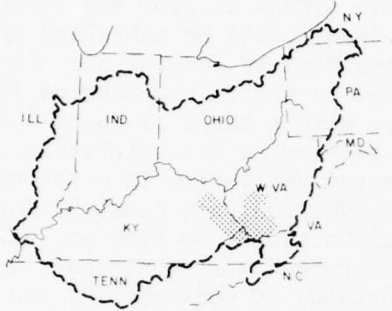
4. Recreation Needs. Comparisons of outdoor recreation demands (8.2 million) with use (4.7 million) at inventoried facilities indicated that approximately 60 percent of the Scioto demand in 1960 was being met. The unmet demand (3.5 million recreation days) could be satisfied by the construction of those potential sites identified by Federal and state agencies. The inventory of potential sites in the Scioto Subarea includes nine Corps of Engineers' reservoirs with a total of about 6,000 acres impounded. Although most of these reservoirs are relatively small in size (380 to 1,385 acres), projected visitation is expected to exceed 6.0 million at the nine sites. In addition, new construction and expansion of four state parks, a state forest, four fish and wild-life areas, and portions of Wayne National Forest will contribute to meeting the estimated needs. These potentials, if constructed, can be expected to satisfy current needs (3.5 million recreation days), but will fall short of meeting needs identified for the first target year (1980). In this 20 year period, outdoor recreation needs are estimated to more than quadruple. Estimated needs for all target years in the Scioto are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 3.5 | 14.8 | 30.8 | 46.8 |

Although the potential areas, if constructed, will satisfy much of the recreation needs through 1980, further planning and development of the Scioto's outdoor recreation resources is required if the demands for future leisure opportunities are to be adequately met.

J. Guyandot-Big Sandy-Little Sandy



1. General. Nestled in the rugged uplands of eastern Kentucky, western Virginia, and southwestern West Virginia, the Guyandot Subarea occupies the position of a relatively untapped recreation hinterland. The 5,928-square mile unit of the Ohio River Basin is more than 90 percent rural, but largely unsuited for agrarian pursuits. Manufacturing remains rather insignificant in the 14-county tri-state subarea. Mining dominates the area's economy and

labor force, but the economic role of this activity is expected to diminish. No SMSA's fall within the confines of the subarea's boundary. According to the Projective Economic Study, the Guyandot will experience a population decline of approximately 64,000 by 1980. Out-migration of the younger age groups will continue to drain the subarea's populace.

Although the existing road system is somewhat deficient, access to the recreation resources of this subarea would be greatly improved under the Appalachian development highway program.

2. Recreation Demand. The estimated water-oriented outdoor recreation demand (4.8 million recreation days in 1960) is among the lowest in the entire Ohio River Basin. This relatively small demand is a direct result of the absence of large metropolitan centers within close proximity to the Guyandot's existing and potential resources. Approximately 80 percent of this demand originates from the subarea's 463,700 inhabitants. The remaining 20 percent originates from 13 SMSA's within 125 miles of the Guyandot's borders. Estimated outdoor recreation demands focused on Subarea J are indicated in the following table:

OUTDOOR RECREATION DEMANDS

| Activity | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 3,302 | 7,793 | 14,066 | 20,340 |
| Boating | 1,239 | 3,023 | 5,514 | 7,992 |
| Water Skiing | 196 | 604 | 1,205 | 1,805 |
| Picnicking | 1,906 | 3,812 | 6,309 | 8,787 |
| Camping | 376 | 1,248 | 2,602 | 3,948 |
| Sightseeing | 3,291 | 8,688 | 16,685 | 24,715 |
| Nature Walks | 1,441 | 2,680 | 4,136 | 5,577 |
| Hiking | 202 | 650 | 1,311 | 1,970 |
| Total Activity Days | 11,953 | 28,498 | 51,828 | 75,134 |
| Total Recreation Days (millions) | 4.8 | 11.4 | 20.7 | 30.0 |

3. Recreation Supply. The Guyandot exhibits a medial outdoor recreation picture in terms of providing water-oriented leisure opportunities in relation to the Ohio River Basin as a whole. Total visitation to Guyandot recreation areas (38,087 acres of land and water) in 1960 was 0.4 million. Nearly half of this use occurred at the Corps of Engineers Dewey Reservoir. The remaining visitation took place at two state parks, three state forests, the Breaks Interstate Park, and parcels of Jefferson National Forest.

The 1960 inventoried visitation and land and water acreages are indicated on the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 13,116 | 24,971 | NA | 38,087 |
| Water | 1,100 | 99 | NA | 1,199 |
| Recreation Days (millions) | 0.2 | 0.2 | NA | 0.4 |

4. Recreation Needs. Comparison of outdoor recreation demands (4.8 million recreation days) with supply (0.4 million) at inventoried facilities in 1960 indicated only eight percent of the demand was being met. However, the resulting recreation need (4.4 million) is relatively small in comparison with total basin needs (105.4 million) or even average subarea needs (5.5 million). The Guyandot recreation needs projected to target years reveal the following figures:

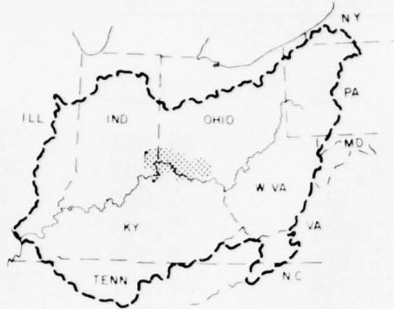
OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 4.4 | 11.0 | 20.3 | 29.6 |

The Guyandot's current recreation needs, and those in the next two decades, are not as serious a deficiency as they might at first appear. Since 1960, expanded facilities and new areas within the subarea have accounted for an additional 1,702,500 visitation (1963). Potential recreation areas identified in this study can be expected to not only satisfy the unmet need in 1960, but also satisfy a goodly portion of that need projected for 1980. Principal potentials aimed at meeting this goal are eight Corps of Engineers' reservoirs (Fishtrap, Grayson, Paintsville, Yatesville, John W. Flannagan, North Fork Pound River, Haysi, and Justice). Total estimated visitation at these sites is expected to exceed 1,845,000 annually. In addition, expansion at two

state parks, one state forest, and two fish and game areas can be expected to satisfy a portion of future needs. Satisfaction of needs beyond the 1980 target year will require additional study.

K. Ohio-Cincinnati



1. General. Subarea K, bisected by the mainstem of the Ohio River, is one of the smallest subareas in size (4,120 square miles). It is dominated by the Cincinnati metropolitan area which includes counties in both Ohio and Kentucky. The subarea embraces a total of four counties each in Ohio and Indiana and six counties in Kentucky. A varied landscape, ranging from rugged cliffs rising above the meandering Ohio River to flat bottomland, offers

natural resources capable of supporting a diversified but somewhat limited, recreation development.

Approximately 1,309,600 persons resided in Subarea K during 1960. The Cincinnati SMSA accounted for more than 80 percent of the subarea's population. Although one of the smallest basin subareas in size, the Cincinnati Subarea ranks fifth largest in terms of population. The Projective Economic Study indicated this population will reach about 1.5 million by 1980 and 1.9 million by the year 2000, or 15 and 46 percent increases, respectively.

Primarily an urbanized subarea, the chief economic activity centers around the manufacturing and service industries. In 1960, manufacturing accounted for roughly one-third of the total employment. Services employed 88,800 and accounted for an additional 18 percent while agriculture, rapidly declining as a source of employment, totaled less than four percent.

Travel patterns in the subarea have historically tended to follow major river basin valleys. Highway 50, paralleling the mainstem of the Ohio River, is a principal example of this trend. In recent years, an ambitious interstate highway construction program has made inroads into opening up large portions of the subarea to travelers from major metropolitan centers. Interstate 75 offers a north-south passage joining together Dayton, Cincinnati, and Lexington. Traversing the basin from northeast to southwest, Interstate 71 serves the subarea and affords access from Cleveland to Louisville. The subarea's northwestern recreation market is served by I-74 from Indianapolis.

2. Recreation Demand. The estimated demand for water-oriented outdoor recreation opportunities in the Cincinnati Subarea totaled 6.6 million recreation days in 1960. This demand is projected to reach 15.7 million by 1980 and exceed 28 million by the turn of the century. Approximately 50 percent of the estimated demand for recreation in the subarea originates within the Cincinnati SMSA. The table on the following page indicates estimated outdoor recreation demands in Subarea K.

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 4,543 | 10,721 | 19,353 | 27,985 |
| Boating | 1,704 | 4,158 | 7,583 | 10,991 |
| Water Skiing | 270 | 832 | 1,660 | 2,487 |
| Picnicking | 2,622 | 5,244 | 8,679 | 12,087 |
| Camping | 517 | 1,716 | 3,578 | 5,428 |
| Sightseeing | 4,528 | 11,954 | 22,957 | 34,005 |
| Nature Walks | 1,982 | 3,686 | 5,688 | 7,670 |
| Hiking | 278 | 895 | 1,804 | 2,710 |
| Total Activity Days | 16,444 | 39,206 | 71,302 | 103,363 |
| Total Recreation Days (millions) | 6.6 | 15.7 | 28.5 | 41.3 |

3. Recreation Supply. Two recreation developments located within the Cincinnati SMSA (a Corps of Engineers reservoir and a county park) account for approximately 85 percent of the inventoried recreation use in the subarea. The West Fork Mill Creek Reservoir and Winton Woods County Park attract over 1.5 million visitors annually to the 180-acre recreation pool and recreation facility developments. Four state parks (one each in Indiana and Kentucky, and two in Ohio), one state forest, and four state fish and wildlife areas offer the balance of inventoried outdoor recreation opportunities in the subarea. The 1960 land and water acreages and visitation for Subarea K are indicated in the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 1,280 | 24,437 | 2,012 | 27,729 |
| Water | 180 | 758 | 183 | 1,121 |
| Recreation Days (millions) | 1.6 | | 1.4 | 3.5 |

4. Recreation Needs. Comparisons of recreation demand (6.6 million recreation days) with existing use (3.5 million) in 1960 at inventoried facilities in the Cincinnati Subarea indicated that just over 50 percent of the total estimated demand was being met. The relative scarcity of water-oriented recreation opportunities within the subarea is the primary

cause for this imbalance between demands and needs. (A total of 1,121 acres of recreational waters were inventoried for 1960.) It is reasonable to assume that a portion of the 3.1 million need can be met in neighboring subareas (L and M) where reservoir-type recreation potential is more prevalent. Programed expansion of three state parks in the subarea can be expected to alleviate some of the remaining base year needs. Development of the proposed White Oak Reservoir in Brown County and the East Fork Reservoir in Clermont County, Ohio, would be capable of accommodating over $2\frac{1}{2}$ million visitors annually.

Estimated projected outdoor recreation needs for target years are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 3.1 | 12.2 | 25.0 | 37.8 |

In order to meet present and projected needs for water-oriented recreation opportunities in the Cincinnati Subarea, the following steps could help satisfy the need: (1) construction of additional impoundments beyond those now programed, (2) construction of small watershed projects aimed at meeting local needs, and (3) exploration of the potential for providing varied water-oriented recreation on the mainstem of the Ohio River.

L. Little Miami-Miami



1. General. Covering about 6,450 square miles in portions of Ohio and Indiana, the Miami Subarea is virtually coextensive with the continuous ribbon of urbanized development extending north from Cincinnati along the valley of the Miami River. Physiographically, it lies within the Central Lowlands known for its glacial till deposits resulting from the penetration of the region by the continental ice sheet. Recreationally speaking, the Miami Subarea offers a favorable combination of conditions

for an accelerated outdoor recreation program; namely, developable resources and a high density population (234 persons per square mile).

The Miami is one of the largest basin subareas in terms of population. The 1960 census of population recorded a total of 1,419,000, ranking the subarea third highest in the basin. Three SMSA's (Dayton, Springfield, and Hamilton-Middletown) form the principal population concentrations in this highly urbanized subarea. Approximately 70 percent of the population resides within these SMSA's. According to the Projective Economic Study, the Miami Subarea's population is projected to reach 1.8 million, or about a 30 percent increase, in the next two decades.

One of the most urbanized subarea's in the entire Ohio River Basin, Subarea L employs the greater portion of its labor force in manufacturing (38%) and services (18%). Agriculture, steadily declining in terms of employment, accounts for less than six percent of the labor force.

The Miami Subarea's transportation network provides ready access to recreation complexes from major metropolitan regions within and outside the subarea. Interstate 75 bisects the subarea and runs in a north-south direction through Toledo, Dayton, and Cincinnati. Interstate 70, major east-west route linking Indianapolis and Columbus, passes through the heart of the Miami Subarea near both Dayton and Springfield. In addition, Interstate 71 crosses the southeastern corner of the subarea and serves Cincinnati-Columbus travelers. Primary and secondary routes generally complement the interstate system opening much of the subarea's outdoor resources to the recreator.

2. Recreation Demand. The estimated demand for water-oriented recreation opportunities in the Miami Subarea (11.2 million recreation days in 1960) exceeded all other subareas in the Ohio River Basin except the Wabash, White, Pittsburgh, and Muskingum. The high effective population centered in and near the subarea was the primary cause for this high demand. Three subarea SMSA's and 14 adjoining SMSA's accounted

for approximately 70 percent of the population focused upon the Miami Subarea in the calculation of demand estimates. Subarea L is the center of a belt of high demand running across the northern reaches of the basin from the Allegheny to the Wabash. Total demand in this belt is approximately 75 million (1960) of which 15 percent is focused on the Miami. Estimated demand is as follows:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 7,754 | 18,299 | 33,032 | 47,765 |
| Boating | 2,909 | 7,098 | 12,945 | 18,763 |
| Water Skiing | 461 | 1,420 | 2,835 | 4,246 |
| Picnicking | 4,476 | 8,952 | 14,816 | 20,634 |
| Camping | 882 | 2,928 | 6,103 | 9,261 |
| Sightseeing | 7,727 | 20,399 | 39,176 | 58,030 |
| Nature Walks | 3,383 | 6,292 | 9,709 | 13,092 |
| Hiking | 474 | 1,526 | 3,076 | 4,622 |
| Total Activity Days | 28,066 | 66,914 | 121,692 | 176,413 |
| Total Recreation Days (millions) | 11.2 | 26.8 | 48.7 | 70.6 |

3. Recreation Supply. Although seven state parks, six state fish and game areas, and two major local areas are included in the inventoried facilities, the Miami's total land and water recreation area was only 21,046 acres in 1960. This ranked the subarea 16th in the basin in terms of total acreage set aside for water-oriented recreation pursuits. No Federal recreation areas were recorded for Subarea L for the base year. The metropolitan populace in and near the subarea has generated a demand for outdoor recreation which has resulted in a visitation of nearly 5,000,000 recreation days to existing facilities in 1960, third highest in the basin. The 1960 inventoried land and water acreages and visitation for Subarea L are indicated in the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | NA | 19,776 | 1,270 | 21,046 |
| Water | NA | 9,343 | 180 | 9,523 |
| Recreation Days (millions) | NA | 4.5 | 0.5 | 5.0 |

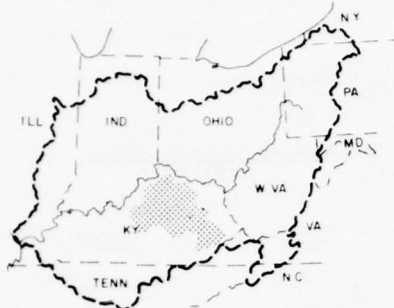
4. Recreation Needs. Water-oriented outdoor recreation needs for the Miami Subarea are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 6.2 | 21.8 | 43.7 | 65.6 |

The comparison of estimated recreation demand (11.2 million) with existing use (5.0 million) at inventoried facilities in 1960 indicated that about 45 percent of the total estimated demand was being met. The resulting needs (6.2 million) for the base year can be, in part, attributed to the relative scarcity of both land and water area within the subarea for recreation pursuits. Three planned Corps of Engineers reservoirs (Brookville, Buck Creek, and Caesar's Creek) can be expected to absorb in excess of 2,000,000 visitors. New developments and expansions at six state parks, seven state fish and wildlife areas, and several major local areas can be expected to meet the balance of the 1960 needs. But programmed developments are inadequate to meet projected future needs. The need for outdoor recreation water-oriented opportunities is expected to increase more than three times by 1980 and seven times by 2000 in the Miami Subarea. Subarea L will be unable, to any great extent, to look to adjoining subareas to meet projected needs, for these areas also will experience high recreational needs.

M. Licking-Kentucky-Salt



1. General. The Licking Subarea lies entirely within the State of Kentucky and incorporates 43 counties covering a total of 12,314 square miles, or approximately 7.5 percent of the basin area. The fifth largest basin subarea, Licking is located primarily in the Blue Grass region surrounding Lexington but also extends into the Appalachian uplands of eastern Kentucky. The Salt, Kentucky, and Licking Rivers form the subarea's major drainage basins and each individually empties into

the mainstem of the Ohio River. An abundance of natural resources combine with numerous potential sites for manmade impoundments to offer the elements necessary to meet existing and future needs for water-oriented recreation.

The Licking's 722,700 inhabitants (1960) represent less than four percent of the total Ohio River Basin populace. Largely a rural subarea, only one-third of the population resides in an urban setting. A large portion of this urban population is centered in the subarea's lone SMSA, Lexington. According to the Projective Economic Study, Subarea M will experience a population growth somewhat slower than the basin as a whole.

Although steadily declining as a source of employment, agriculture has retained itself as a dominant factor in the Licking Subarea's economy. Over 20 percent of the subarea's labor force was engaged in farming during 1960. Manufacturing has shown steady growth and is expected to replace agriculture as the chief source of employment by 1980. The recreation tourism market can be expected to grow substantially as proposed recreational developments are constructed. Tourism now ranks seventh in the State of Kentucky's economy.

Lexington serves as the core of a system of interstate routes which open a large portion of the Licking Subarea to tourists from major metropolitan centers. Interstate 64 traverses the subarea from east to west and is supplemented by the Mountain Parkway. Interstate 75 serves north-south movement of travelers to and through the subarea. Development of secondary roads of outstanding scenic value would enhance access to new recreation opportunities in the Licking Subarea.

2. Recreation Demand. The estimated water-oriented outdoor recreation demand (8.6 million in 1960) for the Licking Subarea represented 5.25 percent of the total basin demand. The Licking Subarea ranked eighth among the 19 subareas in total demand for the 1960 base year. Approximately 40 percent of the subarea's demand originated in the Lexington SMSA and the 13 SMSA's within 125 miles of the subarea.

The estimated outdoor recreation demands for the Licking Subarea are indicated in the following table:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|--------------|--------------|--------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 5,968 | 14,084 | 25,424 | 36,763 |
| Boating | 2,239 | 5,463 | 9,964 | 14,442 |
| Water Skiing | 355 | 1,093 | 2,183 | 3,270 |
| Picnicking | 3,445 | 6,890 | 11,403 | 15,881 |
| Camping | 679 | 2,254 | 4,699 | 7,130 |
| Sightseeing | 5,948 | 15,703 | 30,156 | 44,669 |
| Nature Walks | 2,604 | 4,843 | 7,473 | 10,077 |
| Hiking | <u>365</u> | <u>1,175</u> | <u>2,369</u> | <u>3,559</u> |
| Total Activity Days | 21,603 | 51,505 | 93,671 | 135,791 |
| Total Recreation Days (millions) | 8.6 | 20.6 | 37.5 | 54.3 |

3. Recreation Supply. Approximately 12 percent of the total inventoried land and water recreation area in the Ohio River Basin lies within the Licking Subarea. Over 460,000 acres of the subarea's available recreation acreage falls within the Cumberland National Forest. The Corps of Engineers Buckhorn Reservoir, covering 1,250 acres, is the only other Federal recreation site in the subarea. Two state parks, a state forest, and 11 state fish and game areas form the balance of areas set aside to satisfy outdoor recreational needs. The 1960 visitation to inventoried facilities totaled 625,500. The 1960 acreages and visitation for the Licking Subarea are indicated in the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 235,002 | 15,666 | NA | 250,668 |
| Water | 6,866 | 1,309 | NA | 8,175 |
| Recreation Days (millions) | 0.3 | 0.3 | NA | 0.6 |

4. Recreation Needs. Comparisons of estimated outdoor recreation demands for 1960 (8.6 million) with visitation (0.6 million) to inventoried facilities in the Licking Subarea indicated that only seven per-

cent of the demand was being met. The resulting need (8.0 million recreation days) in the subarea ranked among the highest in the entire basin.

Water-oriented outdoor recreation needs, expressed in annual recreation days for target years, are as follow:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 8.0 | 20.0 | 36.9 | 53.7 |

The estimated needs can be attributed largely to the lack of sufficient water-oriented recreation facilities to meet the estimated demand. The U.S. Army Corps of Engineers has programed a rather ambitious schedule of reservoir project construction to meet this and other water needs. Eight potential Corps reservoirs (Big Half Mountain, Booneville, Cave Run, Carr Fork, Eagle Creek, Falmouth, Red River, and Taylorsville) would provide an additional 28,000 acres of water for outdoor recreation pursuits. Total annual estimated visitation to these Corps of Engineers impoundments (excluding Falmouth and Taylorsville, for which estimates are not available) is expected to exceed three million. Expansion and new development at four state parks, two state fish and wildlife areas, and a major local area are expected to provide additional water-oriented recreational opportunities. Three proposed watershed projects by the Soil Conservation Service, totaling 313 acres of water, form the balance of inventoried programed sites in the Licking Subarea, but all agencies are expected to continue to expand their programs in an effort to alleviate more of the subarea's recreation needs.

N. Ohio-Louisville



1. General. Bisected by the broad reaches of the Ohio River, Subarea N unfolds a panorama of varied topography ranging from flat lowland plains to narrow valleys, spectacular bluffs and lofty ridges rising as high as 600 feet above the Ohio River valley. Although void of natural lakes for water-oriented recreation development, the terrain affords favorable settings for small artificial water impoundments. The 11 counties comprising the subarea,

five in Indiana and six in Kentucky, are the home of 852,600 people (1960), 85 percent of which reside in urban areas. Louisville, lone subarea SMSA, lies within the heart of Subarea N. Total subarea population is expected to increase almost 35 percent between 1960 and 1980 largely due to the dynamic growth of the Louisville metropolitan area.

A diversified manufacturing industry, centered in the Louisville SMSA, accounts for the major economic activity in Subarea N. Agricultural employment is steadily declining while services employment is expected to increase over 50 percent by 1980.

When fully completed, Interstate 64 (east-west route) and Interstate 65 (north-south route) are expected to increase recreation travel in the subarea by channeling traffic to the region from major metropolitan areas. Chicago, St. Louis, Indianapolis, and Cincinnati all will be within one day's driving distance or less. Substandard secondary roads adjacent to the Ohio River have been a detriment to travel and tourist attraction. However, many of these roads have been proposed for scenic roads and parkways in the scenic roads and parkways study of both Indiana and Kentucky. The proposed Ohio River National Parkway would funnel tourists into the Ohio River valley as well as provide sightseeing and other outdoor recreation opportunities along the Ohio River.

2. Recreation Demand. The estimated demand for water-oriented outdoor recreation in the Louisville Subarea was the lowest in the entire Ohio River Basin in 1960. Less than three percent of the total basin demand, or 3.8 million recreation days, was accounted for by the Louisville Subarea in that year. The relatively low demand is directly a result of the low calculated effective population. Although the Louisville SMSA contains an actual population of 725,000 people, its population affecting Subarea N is somewhat lower due to the demand methodology which considers that much of Louisville's recreation demand will flow into neighboring subareas.

Outdoor recreation demands in the subarea, although low, are expected to more than double by 1980 and increase in excess of six times by the year 2020. Projected demands for target years follow:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 2,596 | 6,126 | 11,059 | 15,991 |
| Boating | 974 | 2,376 | 4,334 | 6,282 |
| Water Skiing | 154 | 474 | 974 | 1,418 |
| Picnicking | 1,498 | 2,996 | 4,958 | 6,906 |
| Camping | 295 | 979 | 2,041 | 3,098 |
| Sightseeing | 2,587 | 6,830 | 13,116 | 19,428 |
| Nature Walks | 1,132 | 2,106 | 3,249 | 4,381 |
| Hiking | 159 | 512 | 1,032 | 1,550 |
| Total Activity Days | 9,395 | 22,399 | 40,736 | 59,054 |
| Total Recreation Days (millions) | 3.8 | 9.0 | 16.3 | 23.6 |

3. Recreation Supply. Federally owned recreation land within Subarea N is limited to approximately 8,000 acres of scattered parcels of Hoosier National Forest in Crawford County, Indiana, little of which has been developed for recreation purposes. Compared to neighboring subareas, state-owned recreation lands are also rather limited. Total visitation to three state parks, one state forest, and one state fish and game area (covering 7,200 acres of state lands) was less than 600,000 in 1960. Total inventoried acres of recreation water in Subarea N (183 acres in 1960) was the lowest of the 19 subareas in the Ohio River Basin. The inventory did not include the Ohio River. The 1960 inventoried land and water acreages and visitation for Subarea N are indicated in the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| <u>Acreage:</u> | | | | |
| Total | 8,420 | 7,161 | NA | 15,581 |
| Water | 15 | 168 | NA | 183 |
| Recreation Days (millions) | 0.1 | 0.5 | NA | 0.6 |

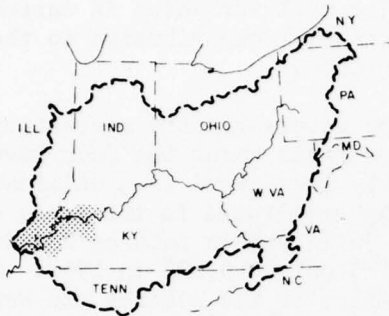
4. Recreation Needs. Comparisons of recreation demand (3.8 million) with existing use (0.6 million) in 1960 indicated that only 15 percent of the total estimated demand was being met at inventoried facilities in the Louisville Subarea. This imbalance between supply and demands, totaling 3.2 million recreation days, could be primarily attributed to the lack of water for recreation. Total inventoried water area in 1960 was 183 acres (exclusive of the Ohio River). Potential recreation areas planned or completed since 1960 are few and will fall short of meeting 1960 need. Rough River Reservoir, located in both Subarea N and P, was completed in late 1960. The 4,375 acre impoundment attracted approximately 695,000 visitors in 1964. Three programed watershed projects by the Soil Conservation Service on the Muddy Fork in Clarke County, will add 76 additional acres of water for recreation pursuits. To date, no other planned expansion exists in Subarea N to meet the balance of the 1960 needs and the following projected needs in the target years:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 3.2 | 8.4 | 15.7 | 23.0 |

Alternative courses of action which could be undertaken to meet present and projected needs in the Louisville Subarea include: (1) construction of additional impoundments beyond those now contemplated in the subarea, (2) transference of the demands to nearby subareas, primarily Subareas P (Green) and S (Cumberland), through construction of additional facilities, and (3) optimum development of the Ohio River potential.

0. Lower Ohio-Evansville



1. General. Subarea 0 embraces a 23 county tri-state area adjacent to the lower reaches of the Ohio River. Bisecting the subarea in half (11 counties in Kentucky, 7 in Illinois, and 5 in Indiana), the meandering Ohio River is probably the subarea's most valued scenic and outdoor recreation resource. A variety of landscape, from rugged hills and deep valleys to broad bottomlands, is contained within the subarea's 7,478 square miles offer-

ing numerous opportunities for diversified recreation developments. The Lower Ohio's climate generally complements outdoor pursuits, both in daytime temperatures and in length of recreation season.

The Lower Ohio is one of the smallest basin subareas in terms of population. The 1960 census of population recorded a total of 559,200 inhabitants, over half of which reside in rural areas. The highest population concentration is centered in the subarea's lone SMSA, Evansville, Indiana. Located in counties in both Indiana and Kentucky, the Evansville SMSA has a population of 199,300 (1960), or approximately 36 percent of the total subarea populace. According to the Projective Economic Study, the subarea's population is expected to increase 25 percent by 1980 and over 70 percent by 2010.

Agriculture was the chief source of employment several decades ago, but this industry has followed the national trend and today makes up less than 10 percent of the Lower Ohio's labor force. Manufacturing, centered in the Evansville SMSA, has grown to where it included 26 percent of the labor force in 1960. The Projective Economic Study indicates rates of growth in employment by 1980 for the following industries: Agriculture, 50 percent decline; Manufacturing, 26 percent increase; Services, 57 percent increase, and Mining, 95 percent increase. (Indiana University's study, Tourist Recreation Resources in Southern Indiana, indicates that the projected mining employment increases are contrary to historic trends. Coal production reached its peak in 1918 and during World War II, but reached a new low during the middle 1950's. Demand for coal for electric generating plants will undoubtedly increase, but any large scale deep-shaft mining is questionable until surface coal supplies become depleted.)

Subarea 0 is laced with highways having excellent potential for development as scenic roads and parkways, but not conducive to high speed, high volume travel. Completion of Interstate 64 will improve movement of east-west travel (between St. Louis and Louisville) along the northern borders of the subarea. A major transportation need, especially in terms of recreation-tourism travel, is a dual-lane roadway traversing the subarea

from north to south, making the subarea more readily accessible from major population centers to the north. Creation of an Ohio River National Parkway along the Ohio River, a bill for which is currently pending in Congress, would make a substantial contribution to the total recreation travel picture of the Lower Ohio.

2. Recreation Demand. Demand for water-oriented recreation opportunities in the Lower Ohio Subarea ranks among the four lowest in the Ohio River Basin. The relatively low demand (4.3 million in 1960) assigned to the subarea can be directly attributed to the small effective population. Only the Evansville SMSA falls within subarea boundaries. Non-SMSA population of Subarea 0 totaled only 359,000 in 1960. Six metropolitan centers fell within 125 miles of the subarea and were included in the calculations of effective population and recreation demands. Estimated demands for target years follow:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-----------------------|------------------------------------------|-------------|--------------|--------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 2,977 | 7,026 | 12,682 | 18,338 |
| Boating | 1,117 | 2,725 | 4,971 | 7,205 |
| Water Skiing | 177 | 545 | 1,088 | 1,630 |
| Picnicking | 1,719 | 3,438 | 5,690 | 7,924 |
| Camping | 339 | 1,125 | 2,346 | 3,560 |
| Sightseeing | 2,967 | 7,833 | 15,043 | 22,282 |
| Nature Walks | 1,299 | 2,416 | 3,728 | 5,027 |
| Hiking | <u>182</u> | <u>586</u> | <u>1,181</u> | <u>1,774</u> |
| Total Activity Days | 10,777 | 25,694 | 46,729 | 67,740 |
| Total Recreation Days | 4.3 | 10.3 | 18.7 | 27.1 |

3. Recreation Supply. The Shawnee and Hoosier National Forests in Illinois and Indiana, respectively, offer approximately 75 percent of the total 220,816 acres of inventoried recreational lands and water in Subarea 0. Recreation areas and county units within these forests accommodated 261,200 visitors in 1960. The balance of the 0.9 million visitation in the subarea occurred at one national monument, six state parks, eight state fish and game areas, and two state forests scattered throughout the tri-state subarea. An accurate measure of recreational use of the mainstem of the Ohio River was not available. Unlike neighboring subareas, the Lower Ohio has no existing Corps of Engineers reservoir or Soil Conservation Service watershed impoundment.

The 1960 inventoried land and water acreages and visitation for Subarea 0 are indicated in the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 168,533 | 52,283 | NA | 220,816 |
| Water | 199 | 2,245 | NA | 2,444 |
| Recreation Days (millions) | 0.3 | 0.5 | NA | 0.8 |

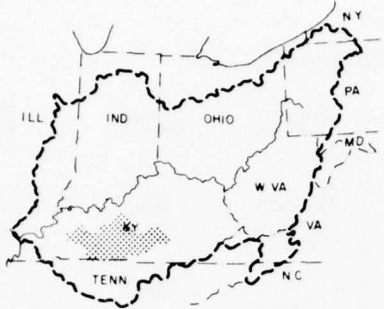
4. Recreation Needs. Comparisons of estimated outdoor recreation demand (4.3 million recreation days) with existing use (0.8 million) in 1960 at inventoried facilities indicated that approximately 20 percent of the total estimated demand was being met in the Lower Ohio Subarea. The resulting need (3.5 million), although relatively small in comparison to total basin need, will be difficult to satisfy at planned facilities. Available information on potential outdoor recreation development provides little hope of meeting the immediate or future recreation needs. The primary potential recreation areas fall within the Hoosier and Shawnee National Forests with total land and water additions of 29,780 and 37,850 acres, respectively. Total potential recreation waters inventoried amount to only 2,100 acres. Construction of additional Soil Conservation Service watershed projects will help meet existing and future needs, but it is reasonable to expect that a good portion of water-oriented needs in Subarea 0 will have to be met at impoundments in adjacent subareas. Further studies on water quality and recreation use of the mainstem of the Ohio River may open a new or expanding area to meet growing recreation needs in Lower Ohio.

Water-oriented recreation needs for the Lower Ohio Subarea are as follow:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 3.5 | 9.5 | 17.9 | 26.3 |

P. Green



1. General. The Green Subarea incorporates 19 counties in west-central Kentucky and contains over 8,000 square miles of unglaciated, plateau-like terrain cut deeply by major streams. Generally forest-covered, the subarea's topography affords numerous attractive settings for recreational development. Climate is favorable for outdoor pursuits, both in length of season and daytime temperatures. Lying in the southern third of the basin, the Green Sub-

area has a recreation season somewhat longer than northeastern subareas.

The smallest subarea in the Ohio River Basin in terms of total population, Green Subarea's population density is only 48.6 persons per square mile. Only 25 percent of the 393,100 population is considered urban, and according to the Projective Economic Study there is expected to be no significant increase in urbanization before 1980. Population projections reveal that Subarea P, containing no large metropolitan areas, will be one of the slowest growing subareas in the basin.

Agriculture has historically held the dominant position in the subarea's economy. Although rapidly declining as a source of employment, agriculture remained the chief employer in 1960 with nearly 27 percent of the labor force engaged in agrarian pursuits. Manufacturing is expected to nearly double in size of labor force by 1980 while the total number engaged in farming is expected to be reduced by half. The State of Kentucky's emphasis on tourism, coupled with construction of new reservoirs and scenic roads and parkways, should add impetus to tourism as a source of economic activity.

The Green Subarea contains a network of primary roads which complement a healthy outdoor recreation picture. Interstate 65, U.S. Routes 31 W, 41, 62, 68, 231, and the Kentucky Turnpike afford the traveler access to natural and man-made attractions within the subarea. Construction of 429 miles of scenic roads and parkways at a cost of approximately \$77 million, as proposed in the 1965 Kentucky Scenic Roads and Parkway Study, would provide additional access to recreation facilities as well as provide a recreation experience in themselves. The subarea's demand for sightseeing alone is estimated to exceed 7.5 million activity days by 1980.

2. Recreation Demand. The estimated demand for outdoor recreation in the Green Subarea, 4.2 million in 1960, was one of the lowest in the Ohio River Basin. This low demand resulted from the relatively small subarea population, absence of SMSA's within the subarea, and the distance from major SMSA's outside Subarea P used in calculating the effective

population. Estimates of annual demands in the target years are indicated in the following tabulation:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 2,920 | 6,891 | 12,439 | 17,987 |
| Boating | 1,095 | 2,672 | 4,873 | 7,063 |
| Water Skiing | 173 | 533 | 1,064 | 1,593 |
| Picnicking | 1,685 | 3,370 | 5,577 | 7,768 |
| Camping | 332 | 1,102 | 2,297 | 3,486 |
| Sightseeing | 2,910 | 7,682 | 14,754 | 21,854 |
| Nature Walks | 1,274 | 2,370 | 3,656 | 4,930 |
| Hiking | 178 | 573 | 1,155 | 1,736 |
| Total Activity Days | 10,567 | 25,193 | 45,815 | 66,417 |
| Total Recreation Days (millions) | 4.2 | 10.1 | 18.3 | 26.6 |

3. Recreation Supply. A wealth of natural resources which offer a potential for diversified recreation opportunities abound within the Green Subarea. Yet to date, few of these resources have been developed to any great extent. During 1960 the inventoried land and water acreage set aside for outdoor recreation pursuits totaled 54,302 acres. The majority of these acres fall within the Mammoth Cave National Park which attracted nearly 3/4 million visitors in 1963, or approximately 70 percent of the inventoried total subarea visitation. One national historic site and five state fish and wildlife areas form the balance of recreation areas in the Green Subarea. The 1960 inventoried land and water acreages and visitation for Subarea P are indicated in the following table:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 51,471 | 2,831 | NA | 54,302 |
| Water | 660 | 1,810 | NA | 2,470 |
| Recreation Days (millions) | 0.9 | NA | NA | 0.9 |

4. Recreation Needs. Comparisons of recreation demand (4.2 million) with existing use (0.9 million) in 1960 indicated that 20 percent of the total estimated subarea demand was being met at

inventoried facilities. The resulting need, 3.3 million recreation days, could be substantially met at facilities now under construction, or which have been constructed since 1960. Three potential Corps of Engineers multiple-purpose reservoirs, Green (now under construction), Barren, and Nolin (completed since 1960), will add 24,000 additional acres of recreational water in the Green Subarea. The total capacity of these three reservoirs is estimated to be 1.5 million recreators annually. Construction of four proposed state parks and two Soil Conservation Service watershed projects will contribute greatly to meeting the overall subarea needs.

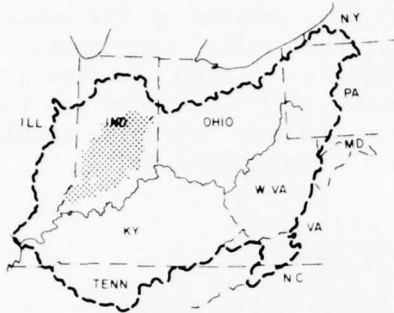
Water-oriented recreation needs for the Green Subarea are as follow:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 3.3 | 9.2 | 17.4 | 25.7 |

If all agencies involved in the construction of water-oriented recreation facilities continue to expand their programs at the present rate, it is highly possible that supply will exceed the demand created by the Green Subarea's effective population. But taking into account the abundant supply of potential recreation resources, it is reasonable to assume that the Green Subarea can, in the future, help alleviate a portion of the unsatisfied need in nearby subareas (O, N, K, and Q). A system of interstate routes to major SMSA's (Louisville and Cincinnati) will help make this possible.

Q. White



1. General. The White Subarea lies entirely within the State of Indiana and incorporates 33 counties which represent 13,522 square miles, or 37 percent of the total area of the Hoosier State. The northern half of the subarea is characterized by gently rolling till plains, low hills, and flat expanses of abandoned glacial lake beds. The southern portion is unglaciated with steep slopes and narrow river valleys.

The absence of natural lakes and the low streamflow conditions in existing water bodies during the summer season have historically hampered water-oriented recreation development.

The 33 counties in the subarea embraced 1,782,900 inhabitants in 1960, representing 38.2 percent of the population of Indiana, and 9.4 percent of the total basin populace. The subarea's two SMSA's, Indianapolis and Muncie, house 45.3 percent of the subarea residents in less than six percent of the land area. By 1980 about 75 percent of the subarea residents are expected to be urban dwellers.

Although agriculture has been rapidly losing ground over the past few decades with only six percent of the subarea's labor force currently engaged in farming, the subarea is considered one of the principal agricultural areas in the Ohio River Basin. Manufacturing is expected to continue as the chief economic activity, but the percentage of the total labor force employed in the services field will increase. Increased interest in the construction of new water impoundments for recreation purposes is expected to put new emphasis on the tourism industry as an important segment of the subarea's economy.

Three interstate routes, I-65, I-70, and I-74, serve the White Subarea, but the present system of primary and secondary highways fails to provide adequate access to the existing and potential outdoor recreation resources of the subarea. The economic benefits which can be derived from the construction of a system of scenic roads and parkways opening the resources to tourists was recognized in Indiana University's report, Tourist Recreation Resources in Southern Indiana. The State of Indiana has since submitted a plan of proposed scenic parkways and roads which, if construction is undertaken, would provide an improved system of traffic flow and better access to both existing and future recreation facilities.

2. Recreation Demand. The estimated demand for recreation in the White Subarea during 1960 exceeded all other basin subareas except its neighbor to the west, the Wabash. Approximately nine percent

of the total basin demand, or 15.1 million recreation days, is ascribed to the White Subarea. This unusually high demand is largely a result of the high effective population, 1,765,900, created by the subarea's close proximity to major SMSA's; namely, Louisville, Cincinnati, Dayton, and Indianapolis. Projected demands for 1980 are closely correlated to the Indiana University tourism study which reported that the 1980 demand for recreation in Indiana is expected to be double the 1960 demand. Projected demands for target years follow:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 10,401 | 24,546 | 44,308 | 64,070 |
| Boating | 3,903 | 9,523 | 17,368 | 25,174 |
| Water Skiing | 618 | 1,903 | 3,801 | 5,692 |
| Picnicking | 6,004 | 12,008 | 19,873 | 27,678 |
| Camping | 1,183 | 3,928 | 8,186 | 12,422 |
| Sightseeing | 10,366 | 27,366 | 52,556 | 77,849 |
| Nature Walks | 4,538 | 8,441 | 13,024 | 17,562 |
| Hiking | 636 | 2,048 | 4,128 | 6,201 |
| Total Activity Days | 37,649 | 89,763 | 163,244 | 236,648 |
| Total Recreation Days (millions) | 15.1 | 35.9 | 65.3 | 94.6 |

3. Recreation Supply. Although the countryside of the White Subarea is not renowned as a vacation mecca, it contains within its borders natural resources long recognized for their recreation value. The picturesque canyons of McCormick's Creek, a tributary of the White River, were set aside as a state park in 1916, the same year the National Park Service was formed. In 1960, McCormick's Creek and five other state parks within the subarea accommodated nearly 0.75 million visitors. The shortage of adequate water for recreation is being partially remedied by the construction of multiple-purpose water impoundments by the Corps of Engineers and the Soil Conservation Service. Until the recent completion of the Monroe Reservoir, Cagles Mill Reservoir was the only Corps of Engineers impoundment within the subarea. This latter 1,400 acre reservoir was visited by over 400,000 recreators in 1963. Two smaller impoundments totaling 190 acres have been constructed by the Soil Conservation Service.

The Hoosier National Forest offers recreation opportunities in six counties within the subarea. Eight state forests encompassing 77,988 acres have made a significant contribution to meeting outdoor recreation needs. During a three-year period beginning in 1960, visitation at

these state forests more than doubled. A moderate amount of picnicking and camping at state fish and game areas round out the White Subarea's major outdoor recreation activity. Only one major local area having over 50 acres of water was inventoried in this study. The following chart summarizes the subarea's existing resources and 1960 visitation:

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 80,588 | 113,132 | 3,863 | 197,583 |
| Water | 2,882 | 2,172 | 610 | 5,664 |
| Recreation Days (millions) | 0.2 | 0.8 | NA | 1.0 |

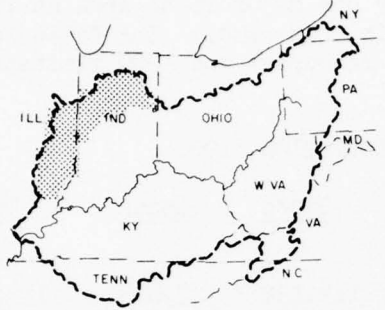
4. Recreation Needs. Comparisons of recreation demand (15.1 million) with existing use (1.0 million) in 1960 indicated that only 6.6 percent of the total estimated subarea demand was being met at inventoried facilities. This great imbalance between supply and demand, totaling nearly 14.1 million recreation days, could be largely attributed to insufficient water surface acreage for recreation pursuits. The recently completed 10,750-acre Monroe Reservoir is expected to absorb a portion of the current need for water-oriented recreation facilities. An additional 21 projects of 687 to 8,900 acres are now being constructed or studied by the Corps of Engineers. The Soil Conservation Service's present watershed program includes 19 projects having from 21 to 1,680 acres of water. These projects and the expansion programs of the Hoosier National Forest and the appropriate State agencies will contribute greatly to meeting the overall subarea needs. But the 1960 need is expected to more than double by the year 1980 and will increase greater than six times by the year 2020. Present planning for new impoundments will require substantial expansion if the projected recreation needs are to be adequately met. Taking into account the relative availability of potential resources and the high need for water-oriented opportunities in neighboring subareas, efforts should be concentrated on meeting the major portion of the needs within the subarea boundary. Limited resources in Subareas K and N may require that a portion of the needs in these subareas be planned for in Subareas Q.

Water-oriented recreation needs estimated for Subarea Q are as follow:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 14.1 | 34.9 | 64.3 | 93.6 |

R. Wabash



1. General. The Wabash, westernmost subarea in the Ohio River Basin, embraces 44 counties in portions of Illinois and Indiana and contains a total of 19,279 square miles, or approximately one-eighth of the Ohio River Basin area. Located primarily in the physiographic province known as the Central Lowlands, the Wabash Subarea is characterized by low to moderate relief with gently rolling plains and low lying hills. Vast expanses of the

subarea lie within the Corn Belt and are largely unsuited for recreation development. But broad-basin tributaries of the Wabash River, covered by scattered forests, form numerous potential sites for the construction of man-made reservoirs for water-oriented recreation in a region largely void of natural lakes.

The Wabash Subarea's 1,362,400 residents represent seven percent of the total basin populace. Two SMSA's, Champaign-Urbana and Terre Haute, fall within the subarea and account for over 17 percent of the subarea population. Population is expected to increase from the present 1.4 million to 1.7 million by 1980 and 2.5 million by 2010.

Manufacturing is presently the major source of economic activity in the Wabash Subarea. According to the Projective Economic Study, manufacturing employment will increase 31 percent by 1980 and 78 percent by 2010 while agriculture employment will decrease 51 and 60 percent, respectively, during the same periods. Employment in services is expected to increase approximately 60 percent by 1980, a slightly greater gain than in the basin as a whole. The impact of tourism and recreation on the subarea's economy is difficult to compute, but tourism as an economic value will gain in significance as increased construction of reservoirs for water-oriented activities occurs.

The primary road system in the Wabash Subarea is presently inadequate. Many secondary state roads are in need of repair and/or expansion. Four interstate highways, I-57, 64, 70, and 74, will cross the subarea and provide the area with a much improved transportation system when completed. These roads will serve to make the area more easily accessible as well as bolster the economy through the promotion of tourism. A system of scenic roads and parkways could further add to the recreation development of the subarea. A bill to establish a Wabash River National Parkway is currently pending in Congress.

2. Recreation Demand. The demand for water-oriented outdoor recreation opportunities in the Wabash Subarea (16.4 million in 1960) exceeded all other subareas in the Ohio River Basin. This unusually high demand

was directly related to the high effective population focused upon the subarea by a total of 20 SMSA's which fall within the zone of this subarea's recreational influence. The primary SMSA's of St. Louis, Chicago, Toledo, Dayton, Cincinnati, Louisville, and Indianapolis circumscribe the Wabash Subarea. Estimated demands for target years are as follows:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 11,358 | 26,805 | 48,385 | 69,965 |
| Boating | 4,262 | 10,399 | 18,966 | 27,490 |
| Water Skiing | 675 | 2,079 | 4,151 | 6,217 |
| Picnicking | 6,556 | 13,112 | 21,700 | 30,223 |
| Camping | 1,292 | 4,289 | 8,941 | 13,566 |
| Sightseeing | 11,319 | 29,882 | 57,387 | 85,006 |
| Nature Walks | 4,956 | 9,218 | 14,224 | 19,180 |
| Hiking | 694 | 2,235 | 4,504 | 6,766 |
| Total Activity Days | 41,112 | 98,019 | 178,258 | 258,413 |
| Total Recreation Days (millions) | 16.4 | 39.2 | 71.3 | 103.4 |

3. Recreation Supply. Although ten state parks and recreation areas, one Corps of Engineers reservoir, six state fish and game areas, and three state forests are scattered throughout the subarea, the Wabash's inventoried existing land and water recreation acreage is only 48,000 acres. This ranks the Wabash with the basin subareas having the lowest acreages devoted to recreation.

Total visitation to all inventoried recreation areas in 1960 was 571,000. This facility use more than tripled by 1963 (1,931,000) largely due to the completion of recreation development at Mansfield Reservoir and increased use of existing state parks.

The 1960 inventoried land and water acreages and visitation for Subarea R are indicated in the table on the following page.

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 4,094 | 42,155 | 1,841 | 48,090 |
| Water | 2,060 | 4,909 | 470 | 7,439 |
| Recreation Days (millions) | NA | 0.6 | 0.3 | 0.9 |

4. Recreation Needs. Comparisons between recreation demand (16.4 million) in the Wabash Subarea and existing use (0.9 million) in 1960 indicated that less than six percent of the total estimated subarea demand was being met at inventoried facilities. The resulting need in each target year substantially exceeds the estimated need in all other basin subareas. An ambitious program of reservoir construction by the Corps of Engineers and a rapidly expanding watershed program by the Soil Conservation Service is expected to alleviate a substantial portion of the estimated needs.

A trio of reservoirs (Huntington, Salamonie, and Mississinewa) in the northeastern portion of the subarea are nearing completion and have been estimated to be capable of accommodating 1,265,000 visitors annually. Big Pine and Wildcat Creek Reservoirs in Indiana are expected to sustain an annual visitation of 500,000 and 700,000, respectively, if constructed. Three Corps reservoirs are planned or under construction in the Illinois portion of the subarea. Lincoln Reservoir estimates of visitation total 1,100,000. Construction of seven Soil Conservation Service watershed projects ranging in size from 120 to 600 acres of water is expected to provide additional water-oriented recreation opportunities.

In spite of ambitious programs by Federal, state, and local agencies, present proposals for expansion of existing and construction of new facilities fall far short of meeting estimated future needs. Interaction between Subarea R and Subarea Q could tend to equalize recreation need, but demand far exceeds supply in each subarea. (Total 1960 needs in these two subareas, 29.6 million recreation days, account for nearly 30 percent of total basin needs).

Estimates of water-oriented recreation needs for the Wabash Subarea relative to 1960 supply are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | 15.5 | 38.3 | 70.4 | 102.5 |

AD-A041 277

ARMY ENGINEER DIV OHIO RIVER CINCINNATI
OHIO RIVER BASIN COMPREHENSIVE SURVEY. VOLUME IX. APPENDIX H. 0--ETC(U)
JUN 66

F/G 8/6

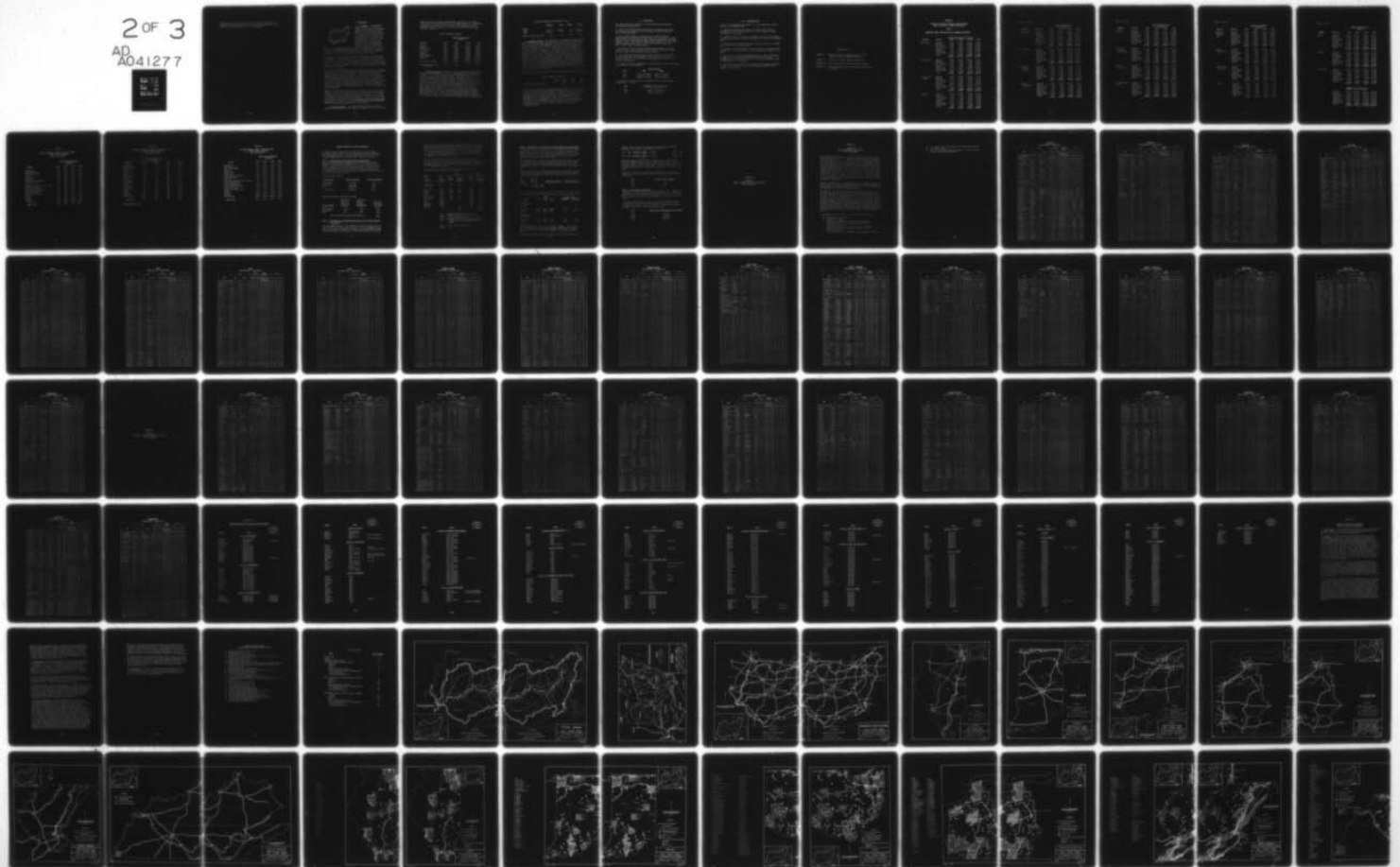
H. 0--ETC(U)

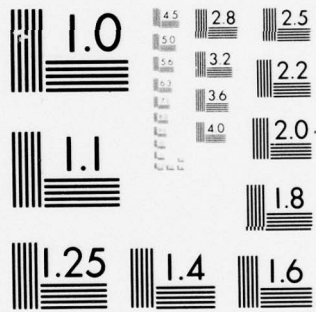
UNCLASSIFIED

NL

2 OF 3

AD
A041277

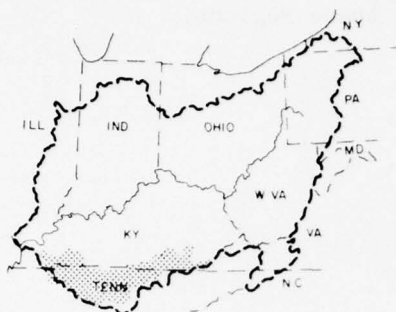




MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Further detailed study of both the White and Wabash Subareas will be necessary to determine a plan of water resource development that will best satisfy the recreational need of these regions.

S. Cumberland



1. General. An abundance of natural resources and more than 130,000 acres of recreational waters stored up in man-made reservoirs combine in the Cumberland Subarea to offer diversified outdoor recreation opportunities unsurpassed in the entire Ohio River Basin. The Cumberland River, flowing through the tablelands of Kentucky and Tennessee, forms the mainstem of a drainage basin which constitutes this southernmost subarea in the

basin. The Cumberland Subarea incorporates 18 counties in Kentucky and 25 counties in Tennessee and contains 16,965 square miles, or approximately 10 percent of the total basin area. A long outdoor season contributes to an invigorating climate for recreation pursuits.

The Cumberland's 1,219,200 inhabitants (1960) represent approximately six percent of the total basin populace. An overall 25 percent growth in population is expected during the 1960-1980 period according to the Projective Economic Study. Urban population, the core of the recreation market, is projected to reach 50 percent of the total population by 1980. Nashville, recording nearly 0.4 million inhabitants in 1960, is the only SMSA within the subarea.

As in many of the basin subareas, agriculture has historically dominated the economy of the Cumberland Subarea. In recent years, however, agriculture has become a rapidly shrinking source of employment, being replaced by manufacturing and services. According to the Projective Economic Study, employment in agriculture will fall to five percent by 1980 while manufacturing and services will show a steady growth and account for 23 and 26 percents, respectively, by the same year. Tourism, now ranking third in the State of Tennessee's economy and seventh in Kentucky, is expected to gain importance in the subarea's economy as even greater numbers of tourists are attracted to existing and potential recreation areas.

Nashville forms the hub of a network of interstate routes serving the subarea. I-65, I-40, and I-24 provide high speed access to the recreation resources in the southwest portion of the subarea. I-75 crosses the northeast arm of the Cumberland Subarea affording excellent access from Lexington, Louisville, and points north. A system of scenic roads and parkways, as proposed in the 1965 Kentucky Scenic Roads and Parkway Study, would provide better access to existing facilities as well as additional sightseeing opportunities in the subarea.

2. Recreation Demand. The estimated demand for water-oriented recreation opportunities in the Cumberland Subarea (9.7 million in 1960)

ranks seventh in the basin. Approximately 90 percent of the demand originates within the subarea and its lone SMSA, Nashville. The balance originates at 10 SMSA's within 125 miles of the Cumberland Subarea. Estimates of annual demands in the target years are indicated in the following tabulation:

OUTDOOR RECREATION DEMANDS

| <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------|------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Swimming | 6,715 | 15,847 | 28,606 | 41,364 |
| Boating | 2,519 | 6,146 | 11,210 | 16,248 |
| Water Skiing | 399 | 1,229 | 2,454 | 3,675 |
| Picnicking | 3,876 | 7,752 | 12,830 | 17,868 |
| Camping | 764 | 2,536 | 5,287 | 8,022 |
| Sightseeing | 6,692 | 17,667 | 33,928 | 50,257 |
| Nature Walks | 2,930 | 5,540 | 8,409 | 11,339 |
| Hiking | 410 | 1,320 | 2,661 | 3,998 |
| Total Activity Days | 24,305 | 57,947 | 105,385 | 152,771 |
| Total Recreation Days (millions) | 9.7 | 23.2 | 42.4 | 61.1 |

3. Recreation Supply. Visitation to outdoor recreation areas within the Cumberland Subarea (12.4 million in 1960) exceeds all other basin subareas. Total inventoried land and water acreages set aside for recreation pursuits (663,053 acres in 1960) is surpassed by only the Allegheny and Kanawha-Little Kanawha Subareas. The amount of water for recreation (134,874 acres) exceeds the total of all water areas inventoried in the remaining 18 basin subareas. The unusually high visitation and resources is largely the result of development at five Corps of Engineers reservoirs, four National Park Service areas, 10 state parks, seven state forests, seven state fish and game areas, and portions of the Cumberland National Forest. The five Corps of Engineers reservoirs (Lake Cumberland, Center Hill, Cheatham, Dale Hollow, and Old Hickory) alone accounted for 11.5 million visitors at 126,000 acres of recreational waters in 1963. The 1960 inventoried land and water acreages and visitation for Subarea S are indicated in the table on the following page.

EXISTING RESOURCES AND VISITATION, 1960

| | <u>Federal</u> | <u>State</u> | <u>Local</u> | <u>Total</u> |
|----------------------------|----------------|--------------|--------------|--------------|
| Acreage: | | | | |
| Total | 540,093 | 122,810 | 150 | 663,053 |
| Water | 133,955 | 830 | 89 | 134,874 |
| Recreation Days (millions) | 10.4 | 2.0 | NA | 12.4 |

4. Recreation Needs. The comparison of estimated recreation demand (9.7 million) with existing use (12.4 million in 1960) at inventoried facilities indicates that apparently no need currently exists for providing additional outdoor recreation opportunities in the Cumberland Subarea. This is a result of the relatively low effective population in an area of abundant resources. But projected growth forecasts indicate that potential recreators in the Cumberland will need facilities for an additional 11 million recreation days by 1980 and over 48 million recreation days by 2020. Construction of 11 planned Corps of Engineers reservoirs is expected to form the focal point of development designed to meet future water-oriented recreation needs. These 11 reservoirs alone will provide an additional 129,000 acres of recreational water, or nearly double existing water recreation opportunities. New and expanded facilities at four state parks is expected to meet a portion of the future needs. Water-related recreation demands will also be met at eight watershed projects (ranging in size from 20 to 750 acres) programed by the Soil Conservation Service.

Water-oriented recreation needs for the Cumberland Subarea are as follows:

OUTDOOR RECREATION NEEDS

| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
|----------------------------|-------------|-------------|-------------|-------------|
| Recreation Days (millions) | - | 10.8 | 29.8 | 48.7 |

Considering the wealth of potential recreation resources and relatively low need created within the subarea, the Cumberland is in a favorable position to help alleviate the needs originating in metropolitan centers beyond the zone of effective population. Weekend and vacation-type recreation facilities could be provided in the Cumberland Subarea to help meet needs as far away as St. Louis, Chicago, Cincinnati, and Indianapolis. The Cumberland, with the aid of the Tennessee Valley Authority's Between-the-Lakes project, will be capable of absorbing a considerable portion of the demands emanating from these major population centers.

VI. CONCLUSIONS

The study of outdoor recreation in the Ohio River Basin resulted in the following determinations:

1. All of the nineteen subareas delineated in the basin have a need for additional development to meet the outdoor recreation demands in each of the target years.
2. The estimated demands for water-oriented outdoor recreation opportunities in the target years 1980, 2000, and 2020 indicate a better than two-fold, four-fold, and six-fold increase, respectively, over the demands in 1960. The target year demands are estimated at: 1980 - 390.6 million recreation days, 2000 - 710.2 million recreation days, and 2020 - 1,029.6 million recreation days.
3. The 1960 visitation at inventoried facilities totaled 58.3 million recreation days. Lack of adequate data on resource capacities required that the inventoried visitation be used as supply.
4. The recreation needs (unsatisfied demands relative to 1960 supply) for the target years were determined to be: 1980 - 332.3 million recreation days, 2000 - 651.9 million recreation days, and 2020 - 971.3 million recreation days.
5. A range of resource requirements to accommodate the unsatisfied demands were estimated to be as follows:

| <u>Year</u> | <u>Land</u> | <u>Acres (1000's)</u> | <u>Water</u> |
|-------------|--------------------|-----------------------|------------------|
| 1980 | 638.0 to 2,857.8 | | 176.1 to 2,904.3 |
| 2000 | 1,160.4 to 5,801.9 | | 365.1 to 6,056.2 |
| 2020 | 1,748.3 to 8,741.7 | | 563.4 to 9,207.9 |

6. Estimates of capital costs of development to meet the unsatisfied demands were as follows:

| <u>Year</u> | <u>Development Costs (millions)</u> |
|-------------|-------------------------------------|
| 1980 | \$ 747.7 to \$1,495.4 |
| 2000 | 1,466.8 to 2,933.6 |
| 2020 | 2,185.4 to 4,370.8 |

VII. RECOMMENDATIONS

In view of the determinations arrived at in the formulation of this study, it is recommended that:

1. Planning and development programs for water-oriented outdoor recreation resources be accelerated by all public agencies in each of the basin's 19 subareas.
2. Detailed studies of the basin's navigable waterways be undertaken to ascertain the extent to which the waterways can alleviate recreational needs.
3. Scenic roads and parkways be planned and constructed as an integral part of water resource developments.
4. Potential scenic riverways be studied in detail to determine their capabilities for meeting a portion of the water-related demands in the basin.
5. The Wabash, White, Pittsburgh SMSA, Muskingum, Little Miami-Miami, Allegheny, and Licking-Kentucky-Salt Subareas be given primary consideration for any detailed studies to alleviate the water-oriented recreational needs of the basin.
6. The recreational programs of all agencies administering recreation facilities be considered in any detailed planning studies of the subareas and the basin.

APPENDIXES I - IV

- APPENDIX I - Tables of Recreation Demand, Supply and Need
Sample Procedure of Demand Methodology
- APPENDIX II - Inventory of Outdoor Recreation Facilities
- APPENDIX III - County Composition of Ohio River Basin Subareas
- APPENDIX IV - Policies Affecting Water-Oriented Outdoor Recreation
Development

APPENDIX I

TABLES OF RECREATION DEMAND, SUPPLY, AND NEED
SAMPLE PROCEDURE OF DEMAND METHODOLOGY

TABLE I

ESTIMATED ANNUAL ACTIVITY DAYS BY SELECTED ACTIVITIES

| Subarea | Activity | Annual Activity Days (1,000's) | | | |
|----------------------|--------------|--------------------------------|---------------|---------------|----------------|
| | | 1960 | 1980 | 2000 | 2020 |
| A-Allegheny | Swimming | 7,776 | 18,351 | 33,126 | 47,900 |
| | Boating | 2,918 | 7,120 | 12,985 | 18,821 |
| | Water Skiing | 462 | 1,423 | 2,841 | 4,255 |
| | Picnicking | 4,489 | 8,978 | 14,858 | 20,694 |
| | Camping | 885 | 2,938 | 6,124 | 9,292 |
| | Sightseeing | 7,750 | 20,460 | 39,292 | 58,202 |
| | Nature Walks | 3,393 | 6,311 | 9,738 | 13,131 |
| | Hiking | 475 | 1,530 | 3,083 | 4,631 |
| | | | <u>28,148</u> | <u>67,111</u> | <u>122,047</u> |
| B-Monongahela | Swimming | 4,833 | 11,406 | 20,588 | 29,771 |
| | Boating | 1,813 | 4,424 | 8,068 | 11,694 |
| | Water Skiing | 287 | 884 | 1,765 | 2,643 |
| | Picnicking | 2,790 | 5,580 | 9,235 | 12,862 |
| | Camping | 550 | 1,826 | 3,806 | 5,775 |
| | Sightseeing | 4,816 | 12,714 | 24,417 | 36,168 |
| | Nature Walks | 2,109 | 3,923 | 6,053 | 8,162 |
| | Hiking | 295 | 950 | 1,914 | 2,876 |
| | | | <u>17,493</u> | <u>41,707</u> | <u>75,846</u> |
| C-Pittsburgh SMSA | Swimming | 8,975 | 21,181 | 38,234 | 55,286 |
| | Boating | 3,368 | 8,218 | 14,988 | 21,724 |
| | Water Skiing | 533 | 1,642 | 3,278 | 4,909 |
| | Picnicking | 5,181 | 10,362 | 17,149 | 23,884 |
| | Camping | 1,021 | 3,390 | 7,065 | 10,720 |
| | Sightseeing | 8,945 | 23,615 | 45,351 | 67,177 |
| | Nature Walks | 3,916 | 7,284 | 11,239 | 15,155 |
| | Hiking | 548 | 1,764 | 3,556 | 5,343 |
| | | | <u>32,487</u> | <u>77,456</u> | <u>140,860</u> |
| D-Beaver | Swimming | 5,272 | 12,442 | 22,459 | 32,476 |
| | Boating | 1,978 | 4,826 | 8,802 | 12,758 |
| | Water Skiing | 313 | 964 | 1,925 | 2,883 |
| | Picnicking | 3,043 | 6,086 | 10,072 | 14,028 |
| | Camping | 600 | 1,992 | 4,152 | 6,300 |
| | Sightseeing | 5,254 | 13,870 | 26,638 | 39,458 |
| | Nature Walks | 2,300 | 4,278 | 6,601 | 8,901 |
| | Hiking | 322 | 1,037 | 2,090 | 3,140 |
| | | | <u>19,082</u> | <u>45,495</u> | <u>82,739</u> |

Table I (con.)

| <u>Subarea</u> | <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|---------------------------------|-----------------|------------------------------------------|---------------|----------------|----------------|
| | | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| E-Upper Ohio | Swimming | 5,153 | 12,161 | 21,952 | 31,742 |
| | Boating | 1,934 | 4,719 | 8,606 | 12,474 |
| | Water Skiing | 306 | 942 | 1,882 | 2,818 |
| | Picnicking | 2,975 | 5,950 | 9,847 | 13,715 |
| | Camping | 586 | 1,946 | 4,055 | 6,153 |
| | Sightseeing | 5,136 | 13,559 | 26,040 | 38,571 |
| | Nature Walks | 2,248 | 4,181 | 6,452 | 8,700 |
| | Hiking | 315 | 1,014 | 2,044 | 3,071 |
| | | <u>18,653</u> | <u>44,472</u> | <u>80,878</u> | <u>117,244</u> |
| F-Muskingum | Swimming | 8,585 | 20,261 | 36,572 | 52,884 |
| | Boating | 3,221 | 7,859 | 14,333 | 20,775 |
| | Water Skiing | 510 | 1,571 | 3,136 | 4,697 |
| | Picnicking | 4,956 | 9,912 | 16,404 | 22,847 |
| | Camping | 976 | 3,240 | 6,754 | 10,248 |
| | Sightseeing | 8,556 | 22,588 | 43,379 | 64,256 |
| | Nature Walks | 3,746 | 6,968 | 10,751 | 14,497 |
| | Hiking | 525 | 1,690 | 3,407 | 5,119 |
| | | <u>31,075</u> | <u>74,089</u> | <u>134,736</u> | <u>195,323</u> |
| G-Kanawha- Little Kanawha | Swimming | 5,380 | 12,697 | 22,919 | 33,141 |
| | Boating | 2,019 | 4,926 | 8,984 | 13,022 |
| | Water Skiing | 320 | 986 | 1,968 | 2,947 |
| | Picnicking | 3,106 | 6,212 | 10,281 | 14,319 |
| | Camping | 612 | 2,032 | 4,235 | 6,426 |
| | Sightseeing | 5,362 | 14,156 | 27,185 | 40,269 |
| | Nature Walks | 2,347 | 4,365 | 6,736 | 9,083 |
| | Hiking | 329 | 1,059 | 2,135 | 3,208 |
| | | <u>19,475</u> | <u>46,433</u> | <u>84,443</u> | <u>122,415</u> |
| H-Ohio- Huntington | Swimming | 2,964 | 6,995 | 12,627 | 18,258 |
| | Boating | 1,112 | 2,713 | 4,948 | 7,172 |
| | Water Skiing | 176 | 542 | 1,082 | 1,621 |
| | Picnicking | 1,711 | 3,422 | 5,663 | 7,888 |
| | Camping | 337 | 1,119 | 2,332 | 3,538 |
| | Sightseeing | 2,954 | 7,798 | 14,977 | 22,184 |
| | Nature Walks | 1,293 | 2,405 | 3,711 | 5,004 |
| | Hiking | 181 | 583 | 1,175 | 1,765 |
| | | <u>10,728</u> | <u>25,577</u> | <u>46,515</u> | <u>67,430</u> |

Table I (con.)

| <u>Subarea</u> | <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|-------------------------------------------|-----------------|------------------------------------------|---------------|----------------|----------------|
| | | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| I-Scioto | Swimming | 5,660 | 13,358 | 24,112 | 34,866 |
| | Boating | 2,124 | 5,182 | 9,452 | 13,700 |
| | Water Skiing | 336 | 1,035 | 2,066 | 3,094 |
| | Picnicking | 3,267 | 6,534 | 10,814 | 15,061 |
| | Camping | 644 | 2,138 | 4,456 | 6,762 |
| | Sightseeing | 5,640 | 14,890 | 28,595 | 42,356 |
| | Nature Walks | 2,470 | 4,594 | 7,089 | 9,559 |
| | Hiking | 346 | 1,114 | 2,245 | 3,374 |
| | | <u>20,487</u> | <u>48,845</u> | <u>88,829</u> | <u>128,772</u> |
| J-Guyandot- Big Sandy- Little Sandy | Swimming | 3,302 | 7,793 | 14,066 | 20,340 |
| | Boating | 1,239 | 3,023 | 5,514 | 7,992 |
| | Water Skiing | 196 | 604 | 1,205 | 1,805 |
| | Picnicking | 1,906 | 3,812 | 6,309 | 8,787 |
| | Camping | 376 | 1,248 | 2,602 | 3,948 |
| | Sightseeing | 3,291 | 8,688 | 16,685 | 24,715 |
| | Nature Walks | 1,441 | 2,680 | 4,136 | 5,577 |
| | Hiking | 202 | 650 | 1,311 | 1,970 |
| | | <u>11,953</u> | <u>28,498</u> | <u>51,828</u> | <u>75,134</u> |
| K-Ohio- Cincinnati | Swimming | 4,543 | 10,721 | 19,353 | 27,985 |
| | Boating | 1,704 | 4,158 | 7,583 | 10,991 |
| | Water Skiing | 270 | 832 | 1,660 | 2,487 |
| | Picnicking | 2,622 | 5,244 | 8,679 | 12,087 |
| | Camping | 517 | 1,716 | 3,578 | 5,428 |
| | Sightseeing | 4,528 | 11,954 | 22,957 | 34,005 |
| | Nature Walks | 1,982 | 3,686 | 5,688 | 7,670 |
| | Hiking | 278 | 895 | 1,804 | 2,710 |
| | | <u>16,444</u> | <u>39,206</u> | <u>71,302</u> | <u>103,363</u> |
| L-Little Miami- Miami | Swimming | 7,754 | 18,299 | 33,032 | 47,765 |
| | Boating | 2,909 | 7,098 | 12,945 | 18,763 |
| | Water Skiing | 461 | 1,420 | 2,835 | 4,246 |
| | Picnicking | 4,476 | 8,952 | 14,816 | 20,634 |
| | Camping | 882 | 2,928 | 6,103 | 9,261 |
| | Sightseeing | 7,727 | 20,399 | 39,176 | 58,030 |
| | Nature Walks | 3,383 | 6,292 | 9,709 | 13,092 |
| | Hiking | 474 | 1,526 | 3,076 | 4,622 |
| | | <u>28,066</u> | <u>66,914</u> | <u>121,692</u> | <u>176,413</u> |

Table I (con.)

| <u>Subarea</u> | <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|---------------------------------|-----------------|------------------------------------------|---------------|---------------|----------------|
| | | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| M-Licking- Kentucky- Salt | Swimming | 5,968 | 14,084 | 25,424 | 36,763 |
| | Boating | 2,239 | 5,463 | 9,964 | 14,442 |
| | Water Skiing | 355 | 1,093 | 2,183 | 3,270 |
| | Picnicking | 3,445 | 6,890 | 11,403 | 15,881 |
| | Camping | 679 | 2,254 | 4,699 | 7,130 |
| | Sightseeing | 5,948 | 15,703 | 30,156 | 44,669 |
| | Nature Walks | 2,604 | 4,843 | 7,473 | 10,077 |
| | Hiking | 365 | 1,175 | 2,369 | 3,559 |
| | | <u>21,603</u> | <u>51,505</u> | <u>93,671</u> | <u>135,791</u> |
| N-Ohio- Louisville | Swimming | 2,596 | 6,126 | 11,059 | 15,991 |
| | Boating | 974 | 2,376 | 4,334 | 6,282 |
| | Water Skiing | 154 | 474 | 947 | 1,418 |
| | Picnicking | 1,498 | 2,996 | 4,958 | 6,906 |
| | Camping | 295 | 979 | 2,041 | 3,098 |
| | Sightseeing | 2,587 | 6,830 | 13,116 | 19,428 |
| | Nature Walks | 1,132 | 2,106 | 3,249 | 4,381 |
| | Hiking | 159 | 512 | 1,032 | 1,550 |
| | | <u>9,395</u> | <u>22,399</u> | <u>40,736</u> | <u>59,054</u> |
| O-Lower Ohio- Evansville | Swimming | 2,977 | 7,026 | 12,682 | 18,338 |
| | Boating | 1,117 | 2,725 | 4,971 | 7,205 |
| | Water Skiing | 177 | 545 | 1,088 | 1,630 |
| | Picnicking | 1,719 | 3,438 | 5,690 | 7,924 |
| | Camping | 339 | 1,125 | 2,346 | 3,560 |
| | Sightseeing | 2,967 | 7,833 | 15,043 | 22,282 |
| | Nature Walks | 1,299 | 2,416 | 3,728 | 5,027 |
| | Hiking | 182 | 586 | 1,181 | 1,774 |
| | | <u>10,777</u> | <u>25,694</u> | <u>46,729</u> | <u>67,740</u> |
| P-Green | Swimming | 2,920 | 6,891 | 12,439 | 17,987 |
| | Boating | 1,095 | 2,672 | 4,873 | 7,063 |
| | Water Skiing | 173 | 533 | 1,064 | 1,593 |
| | Picnicking | 1,685 | 3,370 | 5,577 | 7,768 |
| | Camping | 332 | 1,102 | 2,297 | 3,486 |
| | Sightseeing | 2,910 | 7,682 | 14,754 | 21,854 |
| | Nature Walks | 1,274 | 2,370 | 3,656 | 4,930 |
| | Hiking | 178 | 573 | 1,155 | 1,736 |
| | | <u>10,567</u> | <u>25,193</u> | <u>45,815</u> | <u>66,417</u> |

Table I (con.)

| <u>Subarea</u> | <u>Activity</u> | <u>Annual Activity Days</u> (1,000's) | | | |
|------------------------------------------|-----------------|------------------------------------------|----------------|------------------|------------------|
| | | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| Q-White | Swimming | 10,401 | 24,546 | 44,308 | 64,070 |
| | Boating | 3,903 | 9,523 | 17,368 | 25,174 |
| | Water Skiing | 618 | 1,903 | 3,801 | 5,692 |
| | Picnicking | 6,004 | 12,008 | 19,873 | 27,678 |
| | Camping | 1,183 | 3,928 | 8,186 | 12,422 |
| | Sightseeing | 10,366 | 27,366 | 52,556 | 77,849 |
| | Nature Walks | 4,538 | 8,441 | 13,024 | 17,562 |
| | Hiking | 636 | 2,048 | 4,128 | 6,201 |
| | | <u>37,649</u> | <u>89,763</u> | <u>163,244</u> | <u>236,648</u> |
| R-Wabash | Swimming | 11,358 | 26,805 | 48,385 | 69,965 |
| | Boating | 4,262 | 10,399 | 18,966 | 27,490 |
| | Water Skiing | 675 | 2,079 | 4,151 | 6,217 |
| | Picnicking | 6,556 | 13,112 | 21,700 | 30,223 |
| | Camping | 1,292 | 4,289 | 8,941 | 13,566 |
| | Sightseeing | 11,319 | 29,882 | 57,387 | 85,006 |
| | Nature Walks | 4,956 | 9,218 | 14,224 | 19,180 |
| | Hiking | 694 | 2,235 | 4,504 | 6,766 |
| | | <u>41,112</u> | <u>98,019</u> | <u>178,258</u> | <u>258,413</u> |
| S-Cumberland | Swimming | 6,715 | 15,847 | 28,606 | 41,364 |
| | Boating | 2,519 | 6,146 | 11,210 | 16,248 |
| | Water Skiing | 399 | 1,229 | 2,454 | 3,675 |
| | Picnicking | 3,876 | 7,752 | 12,830 | 17,868 |
| | Camping | 764 | 2,536 | 5,287 | 8,022 |
| | Sightseeing | 6,692 | 17,667 | 33,928 | 50,257 |
| | Nature Walks | 2,930 | 5,450 | 8,409 | 11,339 |
| | Hiking | 410 | 1,320 | 2,661 | 3,998 |
| | | <u>24,305</u> | <u>57,947</u> | <u>105,385</u> | <u>152,771</u> |
| <u>SUMMARY - OHIO RIVER BASIN</u> | | | | | |
| | Swimming | 113,132 | 266,990 | 481,943 | 696,892 |
| | Boating | 42,448 | 103,570 | 188,894 | 273,790 |
| | Water Skiing | 6,721 | 20,701 | 41,331 | 61,900 |
| | Picnicking | 65,305 | 130,610 | 216,158 | 301,054 |
| | Camping | 12,870 | 42,726 | 89,059 | 135,135 |
| | Sightseeing | 112,748 | 297,654 | 571,632 | 846,736 |
| | Nature Walks | 49,361 | 91,811 | 141,666 | 191,027 |
| | Hiking | 6,914 | 22,261 | 44,870 | 67,413 |
| | | <u>409,499</u> | <u>976,323</u> | <u>1,775,553</u> | <u>2,573,947</u> |

TABLE II
 ESTIMATED ANNUAL OUTDOOR RECREATION DEMANDS
 BY BASIN ECONOMIC SUBAREAS
 OHIO RIVER BASIN

| <u>Subarea</u> | <u>Annual Recreation Days</u> (<u>millions</u>) | | | |
|-----------------------------------|------------------------------------------------------|--------------|--------------|----------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| A-Allegheny | 11.2 | 26.8 | 48.8 | 70.8 |
| B-Monongahela | 7.0 | 16.7 | 30.3 | 44.0 |
| C-Pittsburgh SMSA | 13.0 | 31.0 | 56.3 | 81.7 |
| D-Beaver | 7.6 | 18.2 | 33.1 | 48.0 |
| E-Upper Ohio | 7.5 | 17.8 | 32.4 | 46.9 |
| F-Muskingum | 12.4 | 29.6 | 53.9 | 78.1 |
| G-Kanawha-Little Kanawha | 7.8 | 18.6 | 33.8 | 49.0 |
| H-Ohio-Huntington | 4.3 | 10.2 | 18.6 | 27.0 |
| I-Scioto | 8.2 | 19.5 | 35.5 | 51.5 |
| J-Guyandot-Big Sandy-Little Sandy | 4.8 | 11.4 | 20.7 | 30.0 |
| K-Ohio-Cincinnati | 6.6 | 15.7 | 28.5 | 41.3 |
| L-Little Miami-Miami | 11.2 | 26.8 | 48.7 | 70.6 |
| M-Licking-Kentucky-Salt | 8.6 | 20.6 | 37.5 | 54.3 |
| N-Ohio-Louisville | 3.8 | 9.0 | 16.3 | 23.6 |
| O-Lower Ohio-Evansville | 4.3 | 10.3 | 18.7 | 27.1 |
| P-Green | 4.2 | 10.1 | 18.3 | 26.6 |
| Q-White | 15.1 | 35.9 | 65.3 | 94.6 |
| R-Wabash | 16.4 | 39.2 | 71.3 | 103.4 |
| S-Cumberland | 9.7 | 23.2 | 42.2 | 61.1 |
| BASIN TOTAL | 163.7 | 390.6 | 710.2 | 1,029.6 |

TABLE III

SUMMARY OF INVENTORIED ANNUAL ATTENDANCE - 1960*
 BY BASIN ECONOMIC SUBAREAS
 OHIO RIVER BASIN

| <u>Subarea</u> | <u>Annual Recreation Days</u> (<u>millions</u>) | | | <u>Total</u> |
|----------------|------------------------------------------------------|--------------|--------------|--------------|
| | <u>Federal</u> | <u>State</u> | <u>Local</u> | |
| A-Allegheny | 3.6 | 5.4 | NA | 9.0 |
| B-Monongahela | 1.1 | 1.4 | NA | 2.5 |
| C-Pittsburgh | 0.1 | 0.7 | 2.5 | 3.3 |
| D-Beaver | 0.5 | (0.03) | 1.3 | 1.8 |
| E-Upper Ohio | 0.7 | 1.0 | NA | 1.7 |
| F-Muskingum | (0.01) | 1.0 | 1.8 | 2.8 |
| G-Kanawha | 3.6 | 1.1 | NA | 4.7 |
| H-Huntington | 0.1 | 1.6 | NA | 1.7 |
| I-Scioto | 0.4 | 4.3 | NA | 4.7 |
| J-Guyandot | 0.2 | 0.2 | NA | 0.4 |
| K-Cincinnati | 1.6 | 0.5 | 1.4 | 3.5 |
| L-Miami | NA | 4.5 | 0.5 | 5.0 |
| M-Licking | 0.3 | 0.3 | NA | 0.6 |
| N-Louisville | 0.1 | 0.5 | NA | 0.6 |
| O-Evansville | 0.3 | 0.5 | NA | 0.8 |
| P-Green | 0.9 | NA | NA | 0.9 |
| Q-White | 0.2 | 0.8 | NA | 1.0 |
| R-Wabash | NA | 0.6 | 0.3 | 0.9 |
| S-Cumberland | <u>10.4</u> | <u>2.0</u> | <u>NA</u> | <u>12.4</u> |
| BASIN TOTAL | 24.1 | 26.4 | 7.8 | 58.3 |

* Used as 1960 supply

TABLE IV

ESTIMATED ANNUAL OUTDOOR RECREATION NEEDS
 BY BASIN ECONOMIC SUBAREAS
 OHIO RIVER BASIN

| <u>Subarea</u> | <u>Annual Recreation Days</u> (<u>millions</u>) | | | |
|-----------------------------------|------------------------------------------------------|-------------|-------------|-------------|
| | <u>1960</u> | <u>1980</u> | <u>2000</u> | <u>2020</u> |
| A-Allegheny | 2.2 | 17.8 | 39.8 | 61.8 |
| B-Monongahela | 4.5 | 14.2 | 27.8 | 41.5 |
| C-Pittsburgh SMSA | 9.7 | 27.7 | 53.0 | 78.4 |
| D-Beaver | 5.8 | 16.4 | 31.3 | 46.2 |
| E-Upper Ohio | 5.8 | 16.1 | 30.7 | 45.2 |
| F-Muskingum | 9.6 | 26.8 | 51.1 | 75.3 |
| G-Kanawha-Little Kanawha | 3.1 | 13.9 | 29.1 | 44.3 |
| H-Ohio-Huntington | 2.6 | 8.5 | 16.9 | 25.3 |
| I-Scioto | 3.5 | 14.8 | 30.8 | 46.8 |
| J-Guyandot-Big Sandy-Little Sandy | 4.4 | 11.0 | 20.3 | 29.6 |
| K-Ohio-Cincinnati | 3.1 | 12.2 | 25.0 | 37.8 |
| L-Little Miami-Miami | 6.2 | 21.8 | 43.7 | 65.6 |
| M-Licking-Kentucky-Salt | 8.0 | 20.0 | 36.9 | 53.7 |
| N-Ohio-Louisville | 3.2 | 8.4 | 15.7 | 23.0 |
| O-Lower Ohio-Evansville | 3.5 | 9.5 | 17.9 | 26.3 |
| P-Green | 3.3 | 9.2 | 17.4 | 25.7 |
| Q-White | 14.1 | 34.9 | 64.3 | 93.6 |
| R-Wabash | 15.5 | 38.3 | 70.4 | 102.5 |
| S-Cumberland | - 2.7 | 10.8 | 29.8 | 48.7 |
| BASIN TOTAL | 105.4 | 332.3 | 651.9 | 971.3 |

SAMPLE PROCEDURE OF DEMAND METHODOLOGY

In order to better illustrate the demand projection methodology presented in Chapter III, the following sample procedure is offered. The estimation of annual recreation demand (activity days) for water skiing in Subarea D has been selected for illustrative purposes.

Step 1. Determination of Applicable Participation Rates.

Basin participation rates determined from the Outdoor Recreation Resources Review Commission (ORRRC) Report 19 were applied to each subarea. The basin lies within three of the four census regions for which the ORRRC Study presented participation rates. Therefore, the basin participation rates were developed by apportioning the three regional participation rates according to the amount of basin population residing in each region in 1960.

Population Apportionment:

| <u>Census Region</u> | <u>Basin Population</u> | <u>% Basin Population</u> |
|----------------------|-------------------------|---------------------------|
| North Central | 9,411,800 | 49.5 |
| North East | 3,774,300 | 19.9 |
| South | <u>5,814,500</u> | <u>30.6</u> |
| Total (Basin) | 19,000,600 | 100.0% |

Annual Participation Rate (Water Skiing):

| <u>Census Region</u> | <u>ORRRC Study Report 19 Participation Rate</u> | <u>Adjustment Factor (% Basin Population)</u> | <u>Adjusted Participation Rate</u> |
|-----------------------------------------|-------------------------------------------------|-----------------------------------------------|------------------------------------|
| North Central | 0.27 | .495 | 0.13 |
| North East | 0.32 | .199 | 0.06 |
| South | 0.54 | .306 | <u>0.16</u> |
| Basin Participation Rate (Water Skiing) | | | <u>0.35</u> |

Step 2. Determination of Population Affecting the Recreation Demand in Subarea D.

Effective SMSA Population: Two concentric circles having radii of 40 and 125 miles were drawn around the major city of each SMSA within 125 miles of the Subarea D boundary (including the Youngstown-Warren SMSA within the subarea). The portions of the subarea within each of the

two circles were planimetered and the proportions of these areas to the total circle areas were determined. Assuming 60 percent of the SMSA population would be willing to travel 40 miles and 90 percent would go as far as 125 miles (30 percent from 40 to 125 miles) for recreation use, the area proportions were multiplied by the appropriate percent (60 or 30) of the total SMSA population to determine the population of each SMSA which would affect the subarea.

Total effective population in the subarea: The non-SMSA population of the subarea was added to the sum of effective SMSA populations to arrive at a total effective population for the subarea. The Subarea D non-SMSA population is the total subarea population minus the population of the Youngstown-Warren SMSA.

The following table illustrates the mathematical procedure for determining the population affecting Subarea D.

| SMSA's Within <u>125 Miles</u> | 1960 Popu- lation (1000's) | Adjust- ment Factor | <u>40-Mile</u> | <u>40-125 Mile</u> |
|--------------------------------------|-------------------------------------|---------------------------|---------------------------------------------------------------------------------------------|---------------------------|
| | | | Effec- tive Pop- ulation (1000's) | Adjust- ment Factor |
| Youngstown- Warren | 509.0 | .294 | 149.6 | .005 2.5 |
| Cleveland | 1796.5 | .012 | 21.6 | .020 35.9 |
| Akron | 513.5 | .029 | 14.9 | .019 9.8 |
| Canton | 340.3 | .048 | 16.3 | .018 6.1 |
| Elyria | 217.5 | - | - | .018 3.9 |
| Steubenville | 167.7 | .031 | 5.2 | .018 3.0 |
| Pittsburgh | 2405.4 | .090 | 216.5 | .016 38.5 |
| Wheeling | 190.3 | - | - | .020 3.8 |
| Erie | 250.6 | - | - | .020 5.0 |
| Buffalo | 1306.9 | - | - | .001 1.3 |
| Johnstown | 280.7 | - | - | .016 4.5 |
| Altoona | 137.2 | - | - | .012 1.6 |
| | | | 424.1 | 115.9 |
| | <u>424.1</u> | | Population within 40 mile circle. | |
| | <u>115.9</u> | | Population within 40-125 mile circle. | |
| | <u>540.0</u> | | Effective SMSA population. | |
| | <u>355.1</u> | | Non-SMSA population (Subarea D population minus population of Youngstown-Warren SMSA) | |
| | <u>895.1</u> | | Total Effective Population. | |

Step 3. Determination of Increases in Demand Applicable to the Basin.
 The National percent increases in demand for various outdoor recreation activities are presented in Table 6, page 22, ORRRC Study Report 26, for the 1960-1976 and 1960-2000 periods. The percent increases were plotted graphically for water skiing (135 percent for 1960-1976 and 476 percent for 1960-2000 assuming an increase in quality and quantity of facilities available on a per capita basis).

The National percent increases were determined for 1980 and 2010 based on a straight line relationship from 1976 through 2000. The figures thus derived indicated that the National demand for water skiing in 1980 and 2010 would be 2.93 and 7.18 times, respectively, the demand in 1960.

In order to relate basin demand increase rates with those of the Nation, it was assumed that demand increase rates are directly (and primarily) related to increase rates of income and population, and the following equation was developed:

$$\begin{aligned} \text{Basin Demand Increase} &= \text{National Demand Increase} \left(\frac{\text{Basin Pop. Incr.}}{\text{National Pop. Incr.}} \times \frac{\text{Basin Income Incr.}}{\text{National Income I.}} \right) \\ \text{BDI} &= \text{NDI} \left(\frac{\text{BPI}}{\text{NPI}} \times \frac{\text{BII}}{\text{NII}} \right) \end{aligned}$$

The following information was provided by the Projective Economic Study:

| Item | Year | | | Increase Rates | |
|-----------------------------|--------|--------|--------|----------------|-----------|
| | 1960 | 1980 | 2010 | 1960-1980 | 1960-2010 |
| Personal Per Capita Income: | | | | | |
| National* | \$1924 | \$2806 | \$4762 | 1.46 | 2.48 |
| Basin | \$1988 | \$3408 | \$6695 | 1.71 | 3.37 |
| Population (Millions): | | | | | |
| National | 179.8 | 244.8 | 378.2 | 1.36 | 2.10 |
| Basin | 19.0 | 23.1 | 31.6 | 1.22 | 1.66 |

*Determined from the equation $Y_p = 5.9338 + .808Y_{\text{GNP}} - .5050t$, where Y_p = Personal Income, Y_{GNP} = Gross National Product, and t = time; where 1929 = 0; found on page C-17, Appendix C, Projective Economic Study.

Applying these figures to the preceding equation for basin demand increases, the following relationships were found:

$$1980: \text{BDI} = \text{NDI} \left(\frac{1.22}{1.36} \times \frac{1.71}{1.46} \right) = 1.05 \text{ NDI} \qquad \text{NDI} = 2.93$$

$$2010: \text{BDI} = \text{NDI} \left(\frac{1.66}{2.10} \times \frac{3.37}{2.48} \right) = 1.07 \text{ NDI} \qquad \text{NDI} = 7.18$$

The basin demand increase was thus estimated to be 1.05 times the National demand increase of 2.93 for water skiing in 1980. Thus, the basin demand for water skiing in 1980 is expected to be 3.08 times as much as the 1960 water skiing demand. Similarly, the 1960 basin demand for water skiing is expected to increase 7.68 times by the year 2010.

Assuming the demands would increase linearly from 1980 to 2020, the increases in the 1960 demand for water skiing were determined for the target years:

| <u>Year</u> | <u>Increase in 1960 Demand</u> |
|-------------|--------------------------------|
| 1980 | 3.08 |
| 2000 | 6.15 |
| 2020 | 9.21 |

Step 4. Determination of Demands.

The 1960 basin demand for water skiing in Subarea D was determined by multiplying the participation rate (0.35) found in Step 1 by the subarea's effective population (895,100) found in Step 2. The 1960 demand for water skiing in Subarea D was determined to be 313,000 activity days.

The subarea demands for water skiing in the target years were arrived at by applying the demand increase rates derived in Step 3 to the estimated 1960 demands. Thus, the following demands for water skiing in Subarea D were determined for the target years:

| <u>Year</u> | <u>Demand for Water Skiing (Activity Days)</u> |
|-------------|------------------------------------------------|
| 1960 | 313,000 |
| 1980 | 964,000 |
| 2000 | 1,925,000 |
| 2020 | 2,883,000 |

APPENDIX II

INVENTORY
EXISTING OUTDOOR RECREATION FACILITIES
OHIO RIVER BASIN

APPENDIX II

INVENTORY OUTDOOR RECREATION FACILITIES OHIO RIVER BASIN

The inventory of existing and potential recreation facilities in the Ohio River Basin was developed primarily from the Nationwide Planning effort being conducted by this Bureau. The tabulations of data are on a state basis and facilities are catalogued by administrative agencies. The forms for existing areas show facility locations by county within a subarea or the included study area, total (land and water) acreage and water acreage in each area, general recreation activities available, and the attendance at each area in 1960 and 1963 where such information was available. The existing areas are considered as those open for use in the base year, 1960. The forms for potential areas include both programmed future facilities and developments placed in operation after 1960. The most recent attendance figures or estimates of future attendance are presented for the potential areas where such information is available.

While the primary source of inventory data was the Bureau's Nationwide Planning effort, additional information for potential developments was furnished by the Soil Conservation Service, the Corps of Engineers, and pamphlets and brochures of other agencies.

The inventory includes all Federal areas, state areas exclusive of monuments and memorials, and only those major local areas having over 50 acres of water. The limitations on collection of data were established to reduce the cumbersome task of a full inventory and to orient the study more toward recreational developments which are water-enhanced or water-dependent. Private areas were not inventoried because comparable information was not readily available for each state. Studies of private developments are now underway by the Bureau of Outdoor Recreation on a nationwide sampling basis, and the National Association of Soil and Water Conservation Districts (NACD) is developing an inventory of the private sector in conjunction with the Soil Conservation Service.

An explanation of symbols used on the inventory forms follows:

- NA Information not available.
- a Adjoins water area.
- b Minimum or seasonal pool. Obtained from Corps of Engineers water resource development pamphlets or project data sheets.
- c Preliminary estimates by Bureau of Outdoor Recreation.
- d Capacity of programmed facilities estimated by the Corps of Engineers.
- e Visitations adjusted by proportional assignments of total.

- * P. L. 566 project constructed by Soil Conservation Service.
- ** No permanent pool.
- () Included in figures for another area, i.e., Corps, another state, another state agency, etc.

ILLINOIS RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | |
|--------------------------------|------------|--------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|--------|------------|------------|--------|------------|-------|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN |
| FEDERAL | | | | | | | | | | | | | | | | | |
| U. S. Forest Service: | | | | | | | | | | | | | | | | | |
| Shawnee National Forest | | | 125871 | 85683 | 186 | 55 | x | x | x | x | | 203800 | 136000 | 467300 | 193600 | | |
| Recreation Areas | | | | | | | | | | | | | | | | | |
| Pounds Hollow | Gallatin | O-Evansville | 1300 | | 28 | | x | x | x | x | | 56000 | | 91800 | | | |
| Lake Glendale | Pope | O-Evansville | 660 | | 80 | | x | x | x | x | | 40500 | | 47500 | | | |
| Lincoln Memorial | Union | | | 8 | | 1 | x | | | | | | 29900 | | 30700 | | |
| County Units | | | | | | | | | | | | | | | | | |
| Union | Union | | | 30669 | | 10 | x | | | x | | | 44900 | | 45700 | | |
| Massac | Massac | O-Evansville | 3034 | | - | | | | | | | 300 | | 2400 | | | |
| Pope | Pope | O-Evansville | 76232 | | 55 | | x | x | | x | | 62900 | | 194300 | | | |
| Johnson | Johnson | O-Evansville | 8457 | | 5 | | | | | | | 2100 | | 7100 | | | |
| Hardin | Hardin | O-Evansville | 17442 | | 10 | | x | x | x | x | | 30600 | | 60900 | | | |
| Alexander | Alexander | | | 24995 | | 4 | x | x | | | | | 13600 | | 23200 | | |
| Saline | Saline | O-Evansville | 10917 | | - | | x | x | | | | 6100 | | 16300 | | | |
| Jackson | Jackson | | | 30011 | | 40 | x | x | | | | | 47600 | | 94000 | | |
| Gallatin | Gallatin | O-Evansville | 7929 | | 8 | | | | | | | 5100 | | 39000 | | | |
| U. S. Fish & Wildlife Service: | | | | | | | | | | | | | | | | | |
| Crab Orchard National | | | | | | | | | | | | | | | | | |
| Wildlife Area | Williamson | | | 44000 | | 8000 | x | x | x | x | | | NA | | NA | | |
| STATE | | | | | | | | | | | | | | | | | |
| State Parks: | | | | | | | | | | | | | | | | | |
| Dixon Springs | Pope | O-Evansville | 399 | | - | | x | x | | x | | 52800 | | 50300 | | | |
| Fort Massac | Massac | O-Evansville | 836 | | - | | x | x | x | | x | 87000 | | 125100 | | | |
| Cave-in-Rock | Hardin | O-Evansville | 64 | | - | | x | x | x | | | 118400 | | 159600 | | | |
| Ferne Clyffe | Johnson | O-Evansville | 1020 | | 12 | | x | x | | | | 58500 | | 81500 | | | |
| Red Hills | Lawrence | R-Wabash | 940 | | 40 | | x | x | x | | | 73600 | | 104200 | | | |
| Kankakee River | Kankakee | | | 2224 | | - | x | x | x | | | 399500 | | 542500 | | | |
| Lincoln Trail | Clark | R-Wabash | 941 | | 150* | | x | x | x | | | 69000 | | 116600 | | | |
| Giant City | Jackson | | | 1792 | | - | x | x | | x | | 111000 | | 268200 | | | |
| Spittler Woods | Macon | | | 203 | | - | x | x | | | | 27200 | | 47600 | | | |
| Spring Lake | Tazewell | | | 1584 | | 1265 | x | x | x | | | 22700 | | 99500 | | | |
| Starved Rock | LaSalle | | | 1451 | | - | x | x | x | x | | 829000 | | 1115800 | | | |
| Buffalo Rock | LaSalle | | | 43 | | - | x | x | | | | 125100 | | NA | | | |
| Chain O' Lakes | Lake | | | 960 | | 45 | x | x | x | | | 228200 | | 317100 | | | |
| Lincoln's New Salem | Menard | | | 329 | | - | x | x | | x | | 971900 | | 941700 | | | |
| Matthiessen State Park | | | | | | | | | | | | | | | | | |
| Nature Area | LaSalle | | | 175 | | - | x | | | | | | 86400 | | 216500 | | |
| State Recreation Areas: | | | | | | | | | | | | | | | | | |
| Fox Ridge | Coles | R-Wabash | | 752 | | 18 | x | x | x | x | | 44600 | | 82000 | | | |
| Kickapoo | Verillion | R-Wabash | | 1539 | | 120 | x | x | x | | | 77600 | | 315500 | | | |
| Lake Murphysboro | Jackson | | | 904 | | 166 | x | x | x | | | 67300 | | 205000 | | | |
| Grand Marais | St. Clair | | | 1125 | | 213 | x | x | x | | | 84500 | | 136900 | | | |
| Ramsey Lake | Fayette | | | 615 | | 50 | x | x | x | | | 62000 | | 72700 | | | |
| Weldon Springs | Dewitt | | | 119 | | 28 | x | x | x | | | 79000 | | 126200 | | | |
| Illini | LaSalle | | | 406 | | - | x | x | | | | 230000 | | 119500 | | | |
| Channanah Parkway | Will | | | 22 | | 2 | x | x | x | | | 78700 | | 62700 | | | |
| Illinois Beach | Lake | | | 1151 | | - | x | x | x | x | | 578600 | | 945000 | | | |
| Des Plaines | Will | | | 4252 | | 400 | | x | | | | NA | | 8400 | | | |
| State Conservation Areas: | | | | | | | | | | | | | | | | | |
| Wolf Lake | Cook | | | 580 | | 450 | x | | x | x | | 2600 | | NA | | | |
| Horseshoe Lake | Alexander | | | 7901 | | 2400 | x | x | x | | | 95600 | | 108000 | | | |
| Union | Union | | | 6202 | | 213 | | | | | | - | | - | | | |
| Woodford County | Woodford | | | 2896 | | 2790 | x | x | x | | | NA | | 23700 | | | |
| Marshall County | Marshall | | | 2615 | | 2000 | x | x | x | | | NA | | NA | | | |
| Spauld | Marshall | | | 1251 | | 1100 | | | x | | | NA | | NA | | | |

ILLINOIS RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | |
|---------------------------|------------|--------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|------------|-------|------------|---------|
| | | | TOTAL | | WATER | | FISHING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN |
| State Conservation Areas: | | | | | | | | | | | | | | | |
| (con.) | | | | | | | | | | | | | | | |
| Iroquois County | Iroquois | | 1920 | | - | | | | | | | x | | NA | 1600 |
| Chain O'Lakes | Lake | | 3204 | | 2695 | | | x | | | | | | NA | 1600 |
| Jasper County | Jasper | R-Wabash | 297 | | - | | | | | | | | | NA | NA |
| Hamilton County Lake | Hamilton | R-Wabash | 500 | | 76 | | | | | | | | | NA | NA |
| McHenry Dam | McHenry | | - | | 94 | x | | x | | | | | | 80500 | 82800 |
| Saline County | Saline | O-Evansville | 524 | | 105 | x | | x | | | | | | NA | NA |
| Spring Branch | Peoria | | 410 | | 350 | | | | | | | | | NA | NA |
| Washington County | Washington | | 1364 | | 355 | x | | x | x | | | | | NA | 26200 |
| Wayne County | Wayne | R-Wabash | 1252 | | 194 | x | | x | x | | | | | NA | 36300 |
| Mernet Lake | Massac | O-Evansville | 2461 | | 690 | x | | x | | | | | | NA | NA |
| State Forests: | | | | | | | | | | | | | | | |
| Shelby County | Shelby | | 1026 | | - | x | | | | | | | | NA | NA |
| Union | Union | | 3753 | | - | x | | | | | | | | NA | 35200 |
| MAJOR LOCAL | | | | | | | | | | | | | | | |
| County Forest Preserves: | | | | | | | | | | | | | | | |
| Will | Will | | 900 | | - | x | x | | | | | | | NA | NA |
| Lake | Lake | | 1009 | | - | x | | | | | | | | NA | NA |
| Kane | Kane | | 410 | | 80 | x | x | x | | | | | | NA | 36200 |
| DeKalb | DeKalb | | 273 | | - | x | x | | | | | | | NA | NA |
| DuPage | DuPage | | 1060 | | - | x | x | | | | | | | NA | NA |
| Cook | Cook | | 33900 | | 14777 | x | x | x | x | | | | | 6124700 | 7905000 |
| Platt | Platt | | 1000 | | 90 | x | | | | | | | | NA | 450000 |
| Champaign | Champaign | R-Wabash | 441 | | 50 | x | | x | x | x | | | | 325000 | 450000 |
| Reservoir Park | Jackson | | 250 | | 150 | x | | x | | x | | | | 5500 | 6000 |
| Lake Bloomington | McLean | | 1235 | | 635 | x | | x | x | x | | | | NA | NA |
| Lake Springfield | Sangamon | | 8000 | | 4500 | x | | x | x | x | | | | NA | NA |

INDIANA RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | |
|--------------------------------------|------------|--------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|------------|-------|------------|-------|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LOGGING | OTHER | 1960 | | 1963 |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN |
| State Fish and Game Areas: (con.) | | | | | | | | | | | | | | | |
| Willow Slough | Newton | | | 8360 | | 1500 | x | x | | | | | | 51000 | 15200 |
| Winamac | Pulaski | R-Wabash | 4370 | | - | | | | | | | | | 5300 | 8000 |
| Elk Creek | Washington | Q-White | 309 | | 42 | | | | | | | | | NA | 2000 |
| Kingsbury | La Porte | | | 4522 | | 15 | | | | | | | | NA | NA |
| Potoka | Pike | Q-White | 4710 | | 190 | | x | x | x | x | | | | 100 | 500 |
| Spring Valley | Orange | Q-White | 1250 | | 142 | | | | | | | | | NA | 1000 |
| State Forests: | | | | | | | | | | | | | | | |
| Salamonie River | Wabash | R-Wabash | 621 | | 11 | | x | x | x | | | | | 5100 | 33400 |
| Frances Slocum | Miami | R-Wabash | 1087 | | 10 | | x | x | x | | | | | 11600 | 10200 |
| Selmier | Jennings | Q-White | 350 | | - | | x | | | | | | | 1200 | 1500 |
| Jackson | Jackson | Q-White | 13813 | | 130 | | x | x | x | x | | | | 5100 | 14600 |
| Yellowwood | Brown | Q-White | 21600 | | 200 | | x | x | x | | | | | 4200 | 21200 |
| Morgan-Monroe | Monroe | Q-White | 22352 | | 50 | | x | x | x | | | | | 6100 | 16300 |
| Owen-Putnam | Owen | Q-White | 6124 | | - | | | | | | | | | 800 | 1500 |
| Green-Sullivan | Sullivan | R-Wabash | 5130 | | 1650 | | x | x | x | | | | | 6200 | 17200 |
| Martin | Martin | Q-White | 3541 | | 10 | | | | | | | | | 4100 | 11400 |
| Clark | Clark | O-Evansville | 20482 | | 80 | | x | x | x | x | | | | 9300 | 21200 |
| Harrison-Crawford | Harrison | O-Evansville | 20642 | | 15 | | x | x | x | | | | | 15100 | 47400 |
| Ferdinand | Dubois | Q-White | 7378 | | 30 | | x | x | x | x | | | | 9700 | 32400 |
| Pike | Pike | Q-White | 2830 | | - | | x | x | | | | | | 6000 | 10500 |
| MAJOR LOCAL | | | | | | | | | | | | | | | |
| Sullivan County Park | Sullivan | R-Wabash | 1400 | | 420 | | | | | | | | | NA | NA |
| Wolf Lake | Lake | | | 408 | | 300 | x | x | x | x | | | | 3300 | NA |
| Prairie Park | Delaware | Q-White | 2333 | | 420 | | x | | x | x | | | | NA | NA |
| Elk Creek Conservation | | | | | | | | | | | | | | | |
| District: | | | | | | | | | | | | | | | |
| Elk Creek* | Washington | Q-White | 150 | | 48 | | | | | | | x | | NA | NA |
| Spring Valley Conservation | | | | | | | | | | | | | | | |
| District: | | | | | | | | | | | | | | | |
| French Lick Creek* | Orange | Q-White | 1380 | | 142 | | | | | | | x | | NA | NA |

OHIO RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | |
|--------------------------------------------------|------------|--------------|---------|------------|--------|----------|-------------------------------|---------|---------|----------|---------|------------|---------|------------|-------|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | COUNTY | SUB-AREA | | | | | | | BASIN | STUDY AREA | BASIN |
| FEDERAL | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | |
| Berlin Reservoir | Portage | | | 7250 | | 1200 | x | x | x | x | | | 527400 | 523600 | |
| Delaware Reservoir | Delaware | I-Soloto | 7703 | | 1400 | | x | x | x | x | | | 349130 | 470900 | |
| Mosquito Creek Reservoir | Trembly | I-Beaver | 11200 | | 7300 | | x | x | x | x | | | 454300 | 1050300 | |
| Tom Jenkins Reservoir | Athens | E-Upper Ohio | 1735 | | 664 | | x | x | x | x | | | 649400 | 577000 | |
| West Park N. L. Creek Reservoir | Hamilton | K-Cincinnati | 1250 | | 180 | | x | x | | | | | 1594000 | 1576700 | |
| National Park System: | | | | | | | | | | | | | | | |
| Perry's Victory and International Peace Monument | | | | | | | | | | | | | | | |
| | Ontario | | 21 | | - | | | | | x | | | 9600 | NA | |
| Mound City Group National Monument | | | | | | | | | | | | | | | |
| | Ross | I-Scioto | 68 | | - | | x | | | x | NA | | NA | NA | |
| U.S. Fish and Wildlife Service: | | | | | | | | | | | | | | | |
| West Sister Islands National Wildlife Refuge | | | | | | | | | | | | | | | |
| | Lucas | | 23 | | - | | | | | x | | | NA | NA | |
| U.S. Forest Service: | | | | | | | | | | | | | | | |
| Walton National Forest | | | | | | | | | | | | | | | |
| | | | 110917 | | 203 | | x | x | x | x | | | 2400 | 107300 | |
| Recreation Areas | | | | | | | | | | | | | | | |
| Washington | Lawrence | H-Huntington | 343 | | 143 | | x | x | x | x | | | 17000 | 35000 | |
| County Units | | | | | | | | | | | | | | | |
| Athens | Athens | E-Upper Ohio | 1650 | | 43 | | x | x | | | | | 6700 | 8100 | |
| Gallia | Gallia | H-Huntington | 4457 | | 6 | | | | | | | | 3300 | 4100 | |
| Hocking | Hocking | I-Scioto | 19220 | | 2 | | | | | | | | 14200 | 17300 | |
| Jackson | Jackson | H-Huntington | 391 | | - | | | | | | | | 100 | 100 | |
| Lawrence | Lawrence | H-Huntington | 24664 | | 6 | | | | | | | | 29100 | 35500 | |
| Monroe | Monroe | E-Upper Ohio | 4015 | | - | | | | | | | | 3300 | 4100 | |
| Morgan | Morgan | F-Meckingum | 2179 | | - | | | | | | | | 1700 | 2000 | |
| Perry | Perry | F-Meckingum | 16409 | | - | | | | | | | | 12000 | 15300 | |
| Scioto | Scioto | H-Huntington | 4974 | | 1 | | | | | | | | 2300 | 4100 | |
| Vinton | Vinton | H-Huntington | 2012 | | - | | | | | | | | 1700 | 2000 | |
| Washington | Washington | E-Upper Ohio | 9707 | | 2 | | | | | | | | 7500 | 9200 | |
| STATE | | | | | | | | | | | | | | | |
| State Parks and Recreation Areas: | | | | | | | | | | | | | | | |
| Findley State Park | Deerain | | 910 | | 90 | | x | x | x | | | | 243000 | 264100 | |
| Forked Run State Park | Meigs | H-Huntington | 790 | | 100 | | x | x | x | x | | | 94300 | 129300 | |
| Lake Hope State Park | Vinton | H-Huntington | 1962 | | 121 | | x | x | x | x | | | 507500 | 515000 | |
| Jefferson Lake State Park | Jefferson | E-Upper Ohio | 960 | | 30 | | x | x | x | x | | | 239000 | 307900 | |
| Lake Alma State Park | Vinton | H-Huntington | 231 | | 61 | | x | x | x | x | | | 35400 | 331200 | |
| Madison Lake State Park | Madison | I-Scioto | 100 | | 100 | | x | x | x | x | | | 27600 | 210000 | |
| Mount Glenn State Park | Morrow | I-Scioto | 172 | | 30 | | x | x | | | | | 135000 | 130600 | |
| Roosevelt State Park | Scioto | H-Huntington | 256 | | 20 | | x | x | x | x | | | 100700 | 149300 | |
| Scioto Trail State Park | Ross | I-Scioto | 240 | | 30 | | x | x | | | | | 36000 | 47600 | |
| South Bass Island State Park | Ontario | | 32 | | - | | x | x | x | x | | | 1000 | 2700 | |
| Strouds Run State Park | Athens | E-Upper Ohio | 951 | | 160 | | x | x | | | | | 10400 | 54700 | |
| Lake White State Reserve | Franklin | H-Huntington | 60 | | 140 | | x | x | x | | | | 6000 | 127000 | |
| Van Buren Lake State Park | Baldwin | | 136 | | 60 | | x | x | x | | | | 115000 | 266300 | |
| Tar Hollow State Park | Ross | I-Scioto | 430 | | 20 | | x | x | x | | | | 10000 | 14000 | |
| A. W. Mason State Park | Pickaway | I-Scioto | 430 | | 10 | | x | x | | | | | 50000 | 207700 | |
| Clear Fork State Park | Ashland | F-Meckingum | 545 | | - | | x | x | | | | | 20000 | 37700 | |
| Burr Oak State Park | Athens | F-Meckingum | 3150 | | 140 | | x | x | x | | | | 37000 | 460000 | |
| Burnside Lake State Park | Fairfield | I-Scioto | 4600 | | 100 | | x | x | | | | | 171000 | 195000 | |
| Beaver Creek State Park | Columbiana | E-Upper Ohio | 1213 | | - | | x | x | | | | | 44000 | 127400 | |
| Harrison Lake State Park | Fulton | | 196 | | 100 | | x | x | | | | | 30000 | 110700 | |
| Down Lake State Park | Clinton | I-Mingo | 1703 | | 700 | | x | x | | | | | 34000 | 60000 | |
| Edwards Lake State Park | Crawford | E-Upper Ohio | 700 | | 400 | | x | x | x | | | | 66000 | 160000 | |

OHIO RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | | |
|------------------------------------------|------------|--------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|-------|------------|------------|-------|------------|---------|------------|
| | | | TOTAL | | WATER | | PICKNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 | | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA |
| State Parks and Recreation Areas: (con.) | | | | | | | | | | | | | | | | | | |
| East Harbor State Park | Ottawa | | | 1260 | | 850 | x | x | x | x | | | 1224700 | | | | 1497700 | |
| John Bryan State Park | Greene | L-Miami | 751 | - | | | x | x | x | x | | | 259500 | | | | 364000 | |
| Hocking State Park | Hocking | I-Scioto | 1155 | - | | | x | x | | | | | 266000 | | | | 325600 | |
| Houston Woods State Park | Butler | L-Miami | 3524 | 684 | | | x | x | x | x | x | | 502200 | | | | 818100 | |
| Independence Dam State Park | Defiance | | | 50 | | | x | | | | | | 226400 | | | | 293300 | |
| Indian Lake State Park | Logan | L-Miami | 6344 | 5600 | | | x | x | x | x | | | 1707000 | | | | 215500 | |
| Kelley's Island State Park | Erie | | | 412 | | | x | x | | | | | NA | | | | NA | |
| Kliner Lake State Park | Champaign | L-Miami | 660 | 390 | | | x | x | x | x | | | 342700 | | | | 209700 | |
| Lake Lorain State Park | Shelby | L-Miami | 1950 | 1650 | | | x | x | x | x | | | 733200 | | | | 915200 | |
| Nelson-Kennedy State Park | Portage | | | 167 | | | x | | | | | | 52300 | | | | 108900 | |
| Pike Lake State Park | Pike | H-Huntington | 500 | 10 | | | x | x | x | x | x | | 52600 | | | | 102900 | |
| Portage Lake State Park | Summit | | | 2790 | | | x | x | x | | | | NA | | | | 1442800 | |
| Punderson Lake State Park | Genoa | | | 595 | | 85 | x | x | x | x | x | | 203600 | | | | 528700 | |
| Rocky Fork State Park | Highland | I-Scioto | 3974 | 2002 | | | x | x | x | x | | | 1079600 | | | | 1069100 | |
| St. Mary State Park | Augliaire | | | 15536 | | 10500 | x | x | x | | | | 45400 | | | | 1121200 | |
| Stonelick Creek State Park | Clermont | K-Cincinnati | 1057 | 197 | | | x | x | x | x | | | 25400 | | | | 373600 | |
| Adams Lake State Reserve | Adams | K-Cincinnati | 100 | 50 | | | x | | x | | | | 45000 | | | | 47500 | |
| Bark Camp State Park | Belmont | E-Upper Ohio | 1232 | 117 | | | | | | | | | NA | | | | 6000 | |
| Blue Rock State Park | Muskingum | F-Muskingum | 340 | 20 | | | x | x | | | | | 92200 | | | | 161200 | |
| Catawba State Park | Ottawa | | | 7 | | | x | x | | | | | 294000 | | | | 265200 | |
| Big Creek State Reserve | Genoa | | | 565 | | | | | | | | | NA | | | | NA | |
| Fymatung State Park | Ashtabula | | | 4877 | | 3580 | x | x | x | x | x | | 792500 | | | | 1304700 | |
| Crane Creek State Park | Lucas | | | 650 | | | x | x | x | | | | 55900 | | | | 12700 | |
| Headlands State Park | Lake | | | 125 | | | x | x | x | | | | 451200 | | | | 614000 | |
| State Forests: | | | | | | | | | | | | | | | | | | |
| Wolf Run Area | Noble | F-Muskingum | 932 | - | | | | | | | | | NA | | | | 200 | |
| Brush Creek | Adams | K-Cincinnati | 11694 | - | | | | | | | | | 300 | | | | 600 | |
| Blue Rock | Muskingum | F-Muskingum | 4573 | - | | | | | | | | | 11000 | | | | 12500 | |
| Waterloo | Athens | E-Upper Ohio | 477 | - | | | | | | | | | 400 | | | | 500 | |
| Sunfish Creek | Monroe | E-Upper Ohio | 630 | - | | | | | | | | | NA | | | | NA | |
| Shane River | Meigs | H-Huntington | 2408 | - | | | | | | | | | 300 | | | | 400 | |
| Mohican Memorial | Ashland | F-Muskingum | 4007 | 2 | | | | | | | | | 55000 | | | | 58000 | |
| Yellow Creek | Columbiana | E-Upper Ohio | 756 | - | | | | | | | | | 1100 | | | | 1100 | |
| Maumee | Fulton | | | 3071 | | | | | | | | | 5000 | | | | 11100 | |
| Hocking | Hocking | I-Scioto | 8539 | - | | | | | | | | | 20000 | | | | 25000 | |
| Richland Furnace | Jackson | H-Huntington | 2343 | - | | | | | | | | | 200 | | | | 200 | |
| Pike | Pike | H-Huntington | 10568 | - | | | | | | | | | 2500 | | | | 3000 | |
| Tar Hollow | Ross | I-Scioto | 16126 | - | | | | | | | | | 3000 | | | | 3500 | |
| Scioto Trail | Ross | I-Scioto | 9151 | - | | | | | | | | | 5000 | | | | 3500 | |
| Shawnee | Scioto | H-Huntington | 57752 | 20 | | | | | | | | | 8000 | | | | 15000 | |
| Zaleski | Vinton | H-Huntington | 18204 | - | | | | | | | | | 20000 | | | | 25000 | |
| Raccoon | Vinton | H-Huntington | 5650 | - | | | | | | | | | 600 | | | | 300 | |
| Dean | Lawrence | H-Huntington | 1797 | - | | | | | | | | | 800 | | | | 1000 | |
| Chapin | Lake | | | 362 | | | | | | | | | | | | | 1500 | |
| Gifford | Athens | E-Upper Ohio | 320 | - | | | | | | | | | NA | | | | NA | |
| State Fish and Wildlife Areas: | | | | | | | | | | | | | | | | | | |
| Aquila Lake | Genoa | | | 870 | | 130 | x | x | x | | | | 5000 | | | | 5000 | |
| Auburn Marsh | Genoa | | | 431 | | | | | | | | | 2000 | | | | 6000 | |
| Avondale | Muskingum | F-Muskingum | 5465 | 35 | | | | | | | | | NA | | | | 5000 | |
| Basic Incorporated | Seneca | | | 1253 | | | | | | | | | x | | | | 2500 | |
| Beaver Creek | Williams | | | 184 | | 1 | x | | | | | | NA | | | | 1300 | |
| Big Island | Marion | I-Scioto | 1045 | - | | | | | | | | | x | | | | 1000 | |
| Boyar Reservoir | Stark | F-Muskingum | (1405) | ** | | | | | | | | | NA | | | | 1500 | |
| Brush Creek | Jefferson | E-Upper Ohio | 2448 | 2 | | | x | x | | | | | 2000 | | | | 5000 | |
| Canal Fulton | Stark | F-Muskingum | 50 | 40 | | | x | | | | | | NA | | | | NA | |
| Clark Lake | Clark | L-Miami | 289 | 100 | | | x | x | | | | | 50200 | | | | 50000 | |
| Clouse Lake | Ferry | F-Muskingum | 94 | 40 | | | x | x | | | | | 1300 | | | | 1500 | |

OHIO RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | |
|--------------------------------|-------------|--------------|---------|------------|--------|----------|-------------------------------|---------|---------|----------|---------|-------|------------|------------|--------|------------|--|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | COUNTY | SUB-AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| State Fish and Wildlife Areas: | | | | | | | | | | | | | | | | | |
| (cont.) | | | | | | | | | | | | | | | | | |
| Coopers Hollow | Jackson | H-Huntington | 3400 | | 4 | | | x | | | | x | 5200 | | 5000 | | |
| Cumberland | Noble | F-Maskingus | 300 | | 100 | | | | x | | | | 2500 | | NA | | |
| Darke County Lake | Darke | L-Miami | 264 | | - | | | x | | | | | NA | | 1000 | | |
| Dover | Tuscarawas | F-Maskingus | 366 | | - | | | | | | | | NA | | NA | | |
| Fallsville | Highland | I-Scioto | 1212 | | 10 | | | x | | | | x | 3000 | | 1300 | | |
| Grand River | Franklin | D-Beaver | 5201 | | 10 | | | x | | | | x | 4000 | | 10000 | | |
| Grand Lake | Brown | K-Cincinnati | 44 | | 251 | | | x | x | x | | | 50000 | | 101000 | | |
| Greenfield Dam | Fairfield | I-Scioto | 40 | | 4 | | | x | | | | x | NA | | 1400 | | |
| Hamben Orchard | Seneca | | | 40 | | 4 | | x | | | | | 1100 | | 1000 | | |
| Highlandtown | H-Hambsburg | F-Upper Ohio | 1091 | | 10 | | | x | x | | | | 1000 | | 500 | | |
| Hocking Lake | Hocking | I-Scioto | 715 | | 400 | | | x | x | x | | x | 2000 | | 1000 | | |
| Indian Creek | Brown | F-Cincinnati | 1541 | | 70 | | | | | | | x | 8000 | | 10000 | | |
| Jackson Lake State Reserve | Jackson | H-Huntington | 400 | | 240 | | | x | x | x | | | 10000 | | 10000 | | |
| Kaul | Jefferson | F-Upper Ohio | 3000 | | - | | | | | | | | NA | | 100 | | |
| Killdeer Plains | Waynes | | | 5470 | | 100 | | x | x | | | | 10000 | | 5000 | | |
| Knox Lake | Knox | F-Maskingus | 910 | | 500 | | | | | | | x | 2000 | | 2000 | | |
| Lake Park | Mahoning | D-Beaver | 93 | | 20 | | | | | | | x | 1000 | | 500 | | |
| Leesville | Carroll | F-Maskingus | 234 | | - | | | x | | | | | 100 | | 100 | | |
| Liberty | Jackson | H-Huntington | 345 | | - | | | x | | | | | 100 | | 200 | | |
| Little Portage River | ottawa | | | 360 | | 17 | | | | | | | | 18000 | 5000 | | |
| McFee Marsh | Ottawa | | | 166 | | - | | | | | | | | 5000 | 5000 | | |
| Men | Jackson | H-Huntington | 2533 | | - | | | | | | | | NA | | 500 | | |
| Metzer Marsh | Jackson | | | 558 | | 115 | | | | | | | | 20000 | 7000 | | |
| Milan | Erle | | | 294 | | 1 | | x | x | x | | | | 1000 | 500 | | |
| Musk | Chillicothe | F-Maskingus | 4532 | | - | | | | | | | x | NA | | 2000 | | |
| Mohican River | Chillicothe | F-Maskingus | 370 | | - | | | | | | | x | 2000 | | 9000 | | |
| Morris Lake | Waynes | I-Upper Ohio | 114 | | 40 | | | | | | | | 10 | | NA | | |
| New Lake | Adairsville | | | 530 | | - | | x | | | | | | 600 | 1200 | | |
| Nichols Reservoir | Summit | | | 1225 | | 11 | | | | | | | | NA | 100000 | | |
| Oldaker | Highland | I-Scioto | 140 | | 10 | | | x | | | | x | 1500 | | 4500 | | |
| Old Canal | Franklin | F-Scioto | 31 | | 25 | | | x | x | | | x | NA | | 2000 | | |
| Orwell | Adairsville | | | 197 | | 3 | | x | | | | x | 200 | | 1000 | | |
| Oxow Lake | Jefferson | | | 416 | | 50 | | | | | | x | 1000 | | 1000 | | |
| Pater Lake | Butler | L-Miami | 150 | | - | | | | | | | x | 100 | | 100 | | |
| Pleasant Valley | Waynes | I-Scioto | 1403 | | 0 | | | x | | | | x | 100 | | 1000 | | |
| Powelson | Maskingus | F-Maskingus | 2617 | | 5 | | | | x | | | | 300 | | 150 | | |
| Put-in-Bay Hatchery | Ottawa | | | 111 | | - | | | | | | | | NA | NA | | |
| Reel Haven | Erle | | | 2211 | | 300 | | x | | | | x | | 70000 | 15000 | | |
| Rock Mill Dam | Fairfield | I-Scioto | 4 | | 10 | | | | | | | x | NA | | 2500 | | |
| Rush Run | Preble | L-Miami | 1174 | | 0 | | | x | | x | | | 5000 | | 10000 | | |
| Shrove Lake | Waynes | F-Maskingus | 230 | | 40 | | | x | | | | | 1000 | | 4000 | | |
| Spencer Lake | Madison | | | 596 | | 70 | | | x | | | | | 4200 | 4000 | | |
| Spring Valley | Greene | L-Miami | 840 | | 80 | | | x | x | x | | | 40000 | | 75000 | | |
| St. Mary's Lake | Waynes | | | (750) | | (440) | | | | | | | NA | | NA | | |
| Thousand Coves | Ottawa | | | 259 | | 76 | | | | | | | | NA | 500 | | |
| Tranquility | Adams | F-Cincinnati | 1337 | | 20 | | | x | | | | x | 2000 | | 4500 | | |
| Triplic | Adams | F-Upper Ohio | 2030 | | 10 | | | x | x | | | x | 1200 | | 1000 | | |
| Tyoon Lake | Highland | H-Huntington | 694 | | 204 | | | x | x | | | x | 300 | | 4000 | | |
| Urban game farm | Columbus | L-Miami | 540 | | 0 | | | | | | | x | NA | | 1000 | | |
| Van | Washington | F-Upper Ohio | 480 | | 160 | | | x | | | | | 2000 | | 2000 | | |
| Waterloo | Adams | F-Upper Ohio | 124 | | 10 | | | x | x | | | | 1000 | | 1500 | | |
| Wellington | Franklin | | | 100 | | - | | | | | | | | NA | 2000 | | |
| Willard Marsh | Waynes | | | 1074 | | 30 | | | | | | | | 4000 | 1000 | | |
| Wolf Creek | Waynes | F-Maskingus | 150 | | 10 | | | x | x | | | | 500 | | 1000 | | |
| Woodbury | Chillicothe | F-Maskingus | 1000 | | 10 | | | x | x | | | | 100 | | 2000 | | |
| Yepnick Lake | Columbus | F-Upper Ohio | 520 | | 0 | | | x | | | | | 1000 | | 4000 | | |
| Berlin Reservoir | Portage | | | (8140) | | (1590) | | x | x | x | | | | 10000 | 40000 | | |

OHIO RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | |
|-----------------------------------|------------|--------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|------------|---------|------------|-------|
| | | | TOTAL | | WATER | | FENCING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN |
| MAJOR LOCAL | | | | | | | | | | | | | | | |
| Winton Woods County Park | Hamilton | K-Cincinnati | 2012 | | 183 | | x | x | x | | | 1401600 | | 1532100 | |
| Shankley Reservation | Madison | | | 1165 | | 110 | x | x | x | x | | | 972000 | 1496100 | |
| Beaver River Reservation | Cuyahoga | | | 4633 | | 320 | x | x | x | x | | | 9530000 | 6021200 | |
| Mill Creek Park | Muhlenberg | D-Beaver | 2303 | | 200 | | x | x | | | | 1000000 | | 1000000 | |
| Zenith Park | Lucas | | | 320 | | 300 | x | | x | | | | 25600 | 7400 | |
| Perry County Reclamation Area | Perry | F-Muskingum | 4400 | | 50 | | | | | | | NA | | NA | |
| Raywood Dam Park | Montgomery | L-Miami | 870 | | 130 | | x | x | x | | | 255000 | | NA | |
| Wicham Dam Park | Greene | L-Miami | 400 | | 50 | | x | x | | | | 254000 | | NA | |
| Muskingum Conservancy District | | | | | | | | | | | | | | | |
| Atwood Reservoir | Carroll | F-Muskingum | 2050 | | 1550 | | x | x | x | x | x | 446000 | | 194700 | |
| Bethel City Reservoir | Tuscarawas | F-Muskingum | 653 | | 40 | | x | x | | | | 5000 | | 143400 | |
| Bolivar Reservoir | Tuscarawas | F-Muskingum | 3598 | | ** | | x | | | | | 20000 | | 45200 | |
| Charles Hill Reservoir | Wenona | F-Muskingum | 1650 | | 1350 | | x | x | x | x | | 200000 | | 509100 | |
| Clansburg Reservoir | Harrison | F-Muskingum | 6330 | | 1100 | | x | x | x | x | | 104000 | | 77200 | |
| Dover Reservoir | Tuscarawas | F-Muskingum | 1469 | | ** | | x | | | | | 20000 | | 41800 | |
| Leaville Reservoir | Carroll | F-Muskingum | 3607 | | 1000 | | x | x | x | x | | 350000 | | 134000 | |
| Mohawk Reservoir | Columbiana | F-Muskingum | 14024 | | ** | | x | | | | | 10000 | | 15000 | |
| Mohicanville Reservoir | Wayne | F-Muskingum | 13774 | | ** | | | | | | | 4000 | | 7000 | |
| Pinhook Reservoir | Belmont | F-Muskingum | 8770 | | 870 | | x | x | x | x | | 75000 | | 152000 | |
| Pleasant Hill Reservoir | Ashland | F-Muskingum | 1400 | | 400 | | x | x | x | x | | 100000 | | 65500 | |
| Spencerville Reservoir | Wade | F-Muskingum | 4050 | | 350 | | x | x | x | x | | 20000 | | 61300 | |
| Tappan Reservoir | Harrison | F-Muskingum | 2850 | | 2300 | | x | x | x | x | | 120000 | | 110000 | |
| Wills Creek Reservoir | Muskingum | F-Muskingum | 20193 | | (400) | | x | x | | | | 45000 | | 199000 | |
| Trumbull County Metropolitan Park | Trumbull | D-Beaver | (1114) | | (700) | | x | x | x | | | 20000 | | 647400 | |

PENNSYLVANIA RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | |
|-------------------------------------|--------------|-----------------|---------|------------|--------|----------|-------------------------------|---------|---------|----------|---------|---------|------------|------------|-------|------------|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | COUNTY | SUB-AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA |
| FEDERAL | | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | | |
| East Branch Clarion Reservoir | Elk | A-Allegheny | 1450 | | 1050 | | x | x | x | x | x | 120000 | | 100400 | | |
| Thomasta Reservoir | Forest | A-Allegheny | 3250 | | 500 | | x | x | x | x | x | 652000 | | 531200 | | |
| Alvin R. Bush Reservoir | Clinton | | | 1275 | | 160 | x | x | x | | | NA | | 40000 | | |
| Youngsloveny River Reservoir | Somerset | A-Allegheny | 4400 | | 2750 | | x | x | x | x | x | 584000 | | 639000 | | |
| Machone Creek Reservoir | Armstrong | A-Allegheny | 2900 | | 200 | | x | x | x | x | x | 19000 | | 24300 | | |
| Crooked Creek Reservoir | Armstrong | A-Allegheny | 2900 | | 400 | | x | x | x | x | x | 591000 | | 307500 | | |
| Copenaugh River Reservoir | Indiana | A-Allegheny | 2450 | | 500 | | x | x | | x | x | 53000 | | 105200 | | |
| Laysinna Reservoir | Westmoreland | C-Pittsburgh | 3600 | | 250 | | x | x | x | x | x | 110100 | | 112100 | | |
| National Park Service: | | | | | | | | | | | | | | | | |
| Fort Necessity Battlefield | Fayette | B-Middongahonia | 139 | | - | | x | x | | | x | 157000 | | 201100 | | |
| U.S. Fish and Wildlife Service: | | | | | | | | | | | | | | | | |
| Erle National Wildlife Refuge | Crawford | A-Allegheny | 3995 | | 100 | | x | x | | | x | NA | | 4100 | | |
| U.S. Forest Service: | | | | | | | | | | | | | | | | |
| Allegheny National Forest (Summary) | | A-Allegheny | 471001 | | 607 | | x | x | x | x | x | 1197000 | | 1721000 | | |
| Recreation Areas | | | | | | | | | | | | | | | | |
| Maple Run | Elk | A-Allegheny | 60 | | - | | | x | | | x | 4000 | | 5000 | | |
| Cambury | Elk | A-Allegheny | 65 | | - | | | x | | | x | 2500 | | 1000 | | |
| Pipe Bridge | Elk | A-Allegheny | 17 | | - | | | x | | | x | 2000 | | 3000 | | |
| Twin Lakes | Elk | A-Allegheny | 74 | | - | | x | x | x | x | x | 45000 | | 50000 | | |
| Bear Creek | Elk | A-Allegheny | - | | - | | x | x | | | x | NA | | 15000 | | |
| Corduroy | Elk | A-Allegheny | 54 | | - | | | x | | | x | 2300 | | 2200 | | |
| Lola | Elk | A-Allegheny | 40 | | - | | x | x | x | x | x | 41000 | | 69000 | | |
| Wagner Run | Elk | A-Allegheny | 26 | | - | | x | x | | | x | 2300 | | 2200 | | |
| Drasman's Corners | Forest | A-Allegheny | 66 | | - | | | | | | x | 2300 | | 2200 | | |
| Seldom Seen | Forest | A-Allegheny | 164 | | - | | x | x | x | | x | 5700 | | 12700 | | |
| Greely Farm | Forest | A-Allegheny | 15 | | - | | x | x | | | x | 2300 | | 2200 | | |
| Camp Nine | Forest | A-Allegheny | 50 | | - | | x | x | x | x | x | 5700 | | 6400 | | |
| Kelley Pines | Forest | A-Allegheny | 11 | | - | | x | x | x | | x | 4300 | | 12500 | | |
| Watson Run | Forest | A-Allegheny | 117 | | - | | | x | | | x | 3400 | | 3300 | | |
| Asdler | Forest | A-Allegheny | 4 | | - | | x | | x | x | x | NA | | 300 | | |
| Blue Jay | Forest | A-Allegheny | 4 | | - | | x | | | | x | NA | | 100 | | |
| Hill Farm | Forest | A-Allegheny | 3 | | - | | x | | x | x | x | NA | | 100 | | |
| Porter Farm Spring | Forest | A-Allegheny | 3 | | - | | x | | | | x | NA | | 100 | | |
| Porter Farm | Forest | A-Allegheny | 7 | | - | | | x | | | x | 2300 | | 2200 | | |
| Glazier Run | Forest | A-Allegheny | 105 | | - | | | x | x | x | x | 19700 | | 46000 | | |
| Huffman Farm | McKean | A-Allegheny | 90 | | - | | | x | | | x | 4000 | | 4000 | | |
| Camp Ouzetead | McKean | A-Allegheny | 8 | | - | | | x | | | x | 500 | | 500 | | |
| Camp Cornplanter | McKean | A-Allegheny | 46 | | - | | | x | x | x | x | 1500 | | 5400 | | |
| Camp Run | McKean | A-Allegheny | 40 | | - | | | | | x | x | 700 | | 2900 | | |
| Red Bridge | McKean | A-Allegheny | 44 | | - | | | | | x | x | 2100 | | 2500 | | |
| Lewis Run | McKean | A-Allegheny | 4 | | - | | | x | | | x | 25000 | | 5000 | | |
| Kennedy Springs | McKean | A-Allegheny | 20 | | - | | x | x | | | x | 10500 | | 6700 | | |
| Jakes Rocks | Warren | A-Allegheny | 31 | | - | | x | | | | x | NA | | 10000 | | |
| Allegheny Picnic | Warren | A-Allegheny | 19 | | - | | x | x | | | x | 40200 | | 33100 | | |
| Buckskins | Warren | A-Allegheny | 37 | | - | | x | x | x | | x | 3400 | | 4200 | | |
| Bear's Content | Warren | A-Allegheny | 36 | | - | | x | x | | | x | 27000 | | 47000 | | |
| Minister Creek | Forest | A-Allegheny | 3 | | - | | x | x | | | x | 3200 | | 7300 | | |
| Merrison Run | Warren | A-Allegheny | 4 | | - | | | x | | | | 30100 | | 25200 | | |
| Danastone Spruce | Warren | A-Allegheny | 10 | | - | | x | | | | x | 22200 | | 16500 | | |
| Camp B. Russell | Warren | A-Allegheny | 65 | | - | | | x | x | | x | 4600 | | 4900 | | |
| County Units | | | | | | | | | | | | | | | | |
| Elk County | Elk | A-Allegheny | 113363 | | 253 | | x | x | x | x | x | 143500 | | 154100 | | |
| Forest County | Forest | A-Allegheny | 110526 | | 164 | | x | x | x | x | x | 104200 | | 155000 | | |
| McKean County | McKean | A-Allegheny | 125156 | | 151 | | x | x | x | x | x | 212100 | | 260100 | | |
| Warren County | Warren | A-Allegheny | 117977 | | 111 | | x | x | x | x | x | 335300 | | 400300 | | |

PENNSYLVANIA RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | |
|----------------------------|--------------|---------------|---------|------------|--------|----------|-------------------------------|---------|---------|----------|---------|-------|------------|------------|-------|------------|--|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LOOSING | OTHER | 1960 | | 1963 | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | COUNTY | SUB-AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| STATE | | | | | | | | | | | | | | | | | |
| Division of State Parks: | | | | | | | | | | | | | | | | | |
| Kooser | Somerset | A-Allegheny | 375 | | 4 | | | X | X | X | X | | | 167200 | | 205100 | |
| Laurel Mountain | Westmoreland | C-Pittsburgh | 3 | | - | | | | | | | X | NA | | | 36000 | |
| Linn Run | Westmoreland | C-Pittsburgh | 1500 | | - | | | X | | | | X | X | 70900 | | 113000 | |
| Keystone | Westmoreland | C-Pittsburgh | 607 | | 75 | | | X | X | X | X | X | X | 137500 | | 257500 | |
| Crooked Creek | Armstrong | A-Allegheny | 2450 | | 350 | | | X | X | X | X | X | X | 838900 | | 294300 | |
| Raccoon Creek | Beaver | C-Pittsburgh | 723 | | 101 | | | X | X | X | X | X | X | 504000 | | 566000 | |
| Laurel Hill | Somerset | A-Allegheny | 4169 | | 50 | | | X | X | X | X | X | X | 655100 | | 343500 | |
| McConnells Mill | Lawrence | D-Beaver | 1924 | | 25 | | | X | | | | X | X | 17200 | | 106000 | |
| Pymatuning | Crawford | A-Allegheny | 20040 | | 12000 | | | X | X | X | X | X | X | 1586000 | | 2669600 | |
| Bendigo | Elk | A-Allegheny | 124 | | - | | | X | | | | X | X | 94000 | | 70300 | |
| Chapman Dam | Warren | A-Allegheny | 803 | | 60 | | | X | X | X | X | X | X | 177400 | | 348700 | |
| Cook Forest | Clarion | A-Allegheny | 7322 | | - | | | X | X | X | X | X | X | 617700 | | 210000 | |
| Clear Creek | Jefferson | A-Allegheny | 1123 | | 1 | | | X | X | X | X | X | X | 203400 | | 248400 | |
| S. B. Ellis | Clearfield | | | | 720 | | | X | | | | X | X | 46000 | | 43400 | |
| Parker Dam | Clearfield | | | | 525 | | | 20 | X | X | X | X | X | 103000 | | 136100 | |
| Sinnesanoning | Cameron | | | | 160 | | | 140 | X | X | X | X | X | 31100 | | 23000 | |
| Siserville | Potter | | | | 1390 | | | - | X | X | X | X | X | 116500 | | 26500 | |
| Ravensburg | Clinton | | | | 423 | | | 3 | X | X | X | X | X | 91400 | | 29000 | |
| Bucktail | Clinton | | | | 23013 | | | 4000 | X | | | | | NA | | NA | |
| Hiner Run | Clinton | | | | 17 | | | 1 | X | | | X | X | 54600 | | 63400 | |
| Kettle Creek | Clinton | | | | 1200 | | | 100 | X | X | X | X | X | 49100 | | 58400 | |
| Joe Ball | Potter | | | | 67 | | | 2 | X | X | X | X | X | 49100 | | 51400 | |
| Lyman Run | Potter | | | | 500 | | | 40 | X | X | X | X | X | 40300 | | 107600 | |
| Denton Hill | Potter | | | | 500 | | | - | X | | | | | 20000 | | 1700 | |
| Presque Isle | Erie | | | | 4045 | | | 84 | X | X | X | X | X | 302500 | | 3257700 | |
| Black Moshannon | Centre | | | | 2210 | | | 250 | X | X | X | X | X | 316000 | | 326200 | |
| Blue Knob | Bedford | | | | 5330 | | | - | X | X | X | X | X | 190000 | | 92500 | |
| Tough Creek | Huntingdon | | | | 500 | | | 15 | X | X | X | X | X | 59500 | | 14400 | |
| Warrior's Path | Bedford | | | | 200 | | | - | X | X | X | X | X | NA | | NA | |
| Shawnee | Bedford | | | | 3140 | | | 451 | X | X | X | X | X | 1541000 | | 755000 | |
| Poe Valley | Centre | | | | 760 | | | 25 | X | X | X | X | X | 95100 | | 196000 | |
| Whipple Dam | Huntingdon | | | | 254 | | | 21 | X | X | X | X | X | 200000 | | 140100 | |
| Greenwood Furnace | Huntingdon | | | | 332 | | | 5 | X | X | X | X | X | 175300 | | 92000 | |
| Cowans Gap | Fulton | | | | 1348 | | | 42 | X | X | X | X | X | 278300 | | 432100 | |
| Division of State Forests: | | | | | | | | | | | | | | | | | |
| Forbes | Somerset | A-Allegheny | 46521 | | - | | | X | | | | X | X | 70500 | | 75600 | |
| Gallatin | Cambria | A-Allegheny | 1593 | | - | | | X | | | | X | X | 3000 | | 4000 | |
| Mount Davis | Somerset | A-Allegheny | 100 | | - | | | X | | | | X | X | 10200 | | 22700 | |
| Elk | Elk | A-Allegheny | 104597 | | - | | | X | X | X | X | X | X | 102000 | | 112500 | |
| Corn Planter | Forest | A-Allegheny | 1239 | | - | | | X | | | | X | X | 3000 | | 4000 | |
| Kittanning | Jefferson | A-Allegheny | 9271 | | - | | | X | | | | X | X | 30500 | | 35600 | |
| Black Moshannon | Centre | | | | 155334 | | | - | X | X | | X | X | 104000 | | 114500 | |
| Susquehannock | Potter | | | | 293673 | | | - | X | X | X | X | X | 104000 | | 114500 | |
| Spruce | Clinton | | | | 236975 | | | - | X | X | X | X | X | 150000 | | 175000 | |
| Bald Eagle | Centre | | | | 175394 | | | - | X | X | | X | X | 100900 | | 104200 | |
| Bear Meadows | Centre | | | | 550 | | | - | X | | | X | X | 2900 | | 4000 | |
| Detweiler Run | Huntingdon | | | | 200 | | | - | X | | | X | X | 400 | | 600 | |
| Alan Seeger | Huntingdon | | | | 239 | | | - | X | | | X | X | 11000 | | 14800 | |
| Rothenock | Huntingdon | | | | 74263 | | | - | X | X | X | X | X | 111000 | | 116200 | |
| Buchanan | Fulton | | | | 60955 | | | - | X | X | | X | X | 95000 | | 64000 | |
| State Fish Commission: | | | | | | | | | | | | | | | | | |
| Recreation Areas | | | | | | | | | | | | | | | | | |
| Duson Dam | Cambria | A-Allegheny | 58 | | 20 | | | X | | | | X | X | 4900 | | 5400 | |
| Lake Somerset | Somerset | A-Allegheny | 469 | | 251 | | | X | | | | X | X | 9600 | | 12700 | |
| Virgin Run Lake | Payette | B-Monongahela | 138 | | 35 | | | X | | | | X | X | NA | | 3500 | |
| Glade Run Lake | Butler | D-Beaver | 145 | | 60 | | | X | | | | X | X | 7700 | | 8100 | |
| Dutch Fork Lake | Washington | C-Pittsburgh | 609 | | 92 | | | X | | | | X | X | NA | | 7700 | |

NEW YORK RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | |
|--------------------------------------|-------------|-------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|-------|------------|------------|--------|------------|---------|
| | | | TOTAL | | WATER | | FISHING | CAMPING | BOATING | SWIMMING | LOOSING | OTHER | 1960 | | 1963 | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| STATE | | | | | | | | | | | | | | | | | |
| State Parks: | | | | | | | | | | | | | | | | | |
| Ruckhorn Island | Erie | | | 297 | - | | | | | | | | | | | 84200 | 112600 |
| Lake Erie | Chautauqua | A-Allegheny | 355 | | 114 | | x | x | x | x | x | | | | 87000 | 88000 | 113200 |
| Evangola | Erie | | 701 | | - | | x | x | x | x | x | | | | 234800 | | 113200 |
| Niagara Reservation | Niagara | | 433 | | - | | x | | | | x | | | | 252400 | | 4342700 |
| Devil's Hole | Niagara | | 42 | | - | | x | | | | x | | | | 61100 | | 275400 |
| Whirlpool | Niagara | | 109 | | - | | x | | | | x | | | | 242800 | | 446500 |
| Beaver Island | Erie | | 218 | | - | | x | | | | x | | | | 742800 | | 630000 |
| Cuba Reservation | Allegheny | | 274 | | 560 | | x | x | x | x | x | | | | 62300 | | 67000 |
| Allegheny | Cattaraugus | A-Allegheny | 65000 | | 120 | | x | x | x | x | x | | | | 621000 | | 621500 |
| State Forests: | | | | | | | | | | | | | | | | | |
| Chautauqua Reforestation Area | Chautauqua | A-Allegheny | 16700 | | 30 | | x | x | | | x | | | NA | | | NA |
| Cattaraugus Reforestation Area | Cattaraugus | A-Allegheny | 32935 | | 20 | | x | x | | | x | | | NA | | | NA |
| Allegheny Reforestation Area | Allegheny | | 44500 | | 65 | | x | x | | | x | | | NA | | | NA |
| State Fish and Game Areas: | | | | | | | | | | | | | | | | | |
| Carlton Hill Multiple-Use Area | Wyoming | | | 1752 | - | | x | | | | | | | | NA | | NA |
| Canadaway Creek Game Management Area | Chautauqua | A-Allegheny | 2180 | | 5 | | x | x | | | x | | | NA | | | NA |
| Hanging Bog Game Management Area | Allegheny | | | 4341 | | 5 | x | x | | | | | | NA | | | NA |

WEST VIRGINIA RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | | | | | | |
|-----------------------------------|------------------|----------------------------|---------|------------|--------|------------|-------------------------------|---------|---------|----------|---------|-------|------------|------------|-------|------------|-------|------------|--|--|--|--|
| | | | TOTAL | | WATER | | PICKNICKING | CAMPING | BOATING | SWIMMING | LOGGING | OTHER | 1960 | | 1963 | | | | | | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | |
| FEDERAL | | | | | | | | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | | | | | | | | |
| Sutton Reservoir | Braxton | G-Kanawha | 10365 | | 1520 | | | x | x | x | x | x | | NA | | 847000 | | | | | | |
| Tygart Reservoir | Taylor | B-Monongahela | 4670 | | 1700 | | | x | x | x | x | x | | 474500 | | 464900 | | | | | | |
| Gallipolis Lock and Dam | Mason | H-Huntington | 10382 | | 10290 | | | | | x | | | | NA | | 160000 | | | | | | |
| Bluestone Reservoir | Summers | G-Kanawha | 21900 | | 1970 | | | x | x | x | x | x | | 304000 | | 539000 | | | | | | |
| U.S. Forest Service: | | | | | | | | | | | | | | | | | | | | | | |
| George Washington National Forest | | | | | | | | | | | | | | | | | | | | | | |
| Forest | Pendleton, et al | | | | 99385 | | | 31 | x | x | x | x | | | | 148200 | | 284000 | | | | |
| Monongahela National Forest | Randolph, et al | B-Monongahela G-Kanawha | 205873 | | 2963 | | | x | x | x | x | x | | 922000 | | 1025000 | | | | | | |
| STATE | | | | | | | | | | | | | | | | | | | | | | |
| State Parks: | | | | | | | | | | | | | | | | | | | | | | |
| Tygart Lake | Taylor | B-Monongahela | (2505) | | (1700) | | | x | x | x | x | x | | NA | | (208910) | | | | | | |
| Babcock | Fayette | G-Kanawha | 3227 | | - | | | x | x | | x | x | | 40000 | | 64000 | | | | | | |
| Tomlinson Run | Hancock | E-Upper Ohio | 1400 | | 28 | | | x | x | x | x | x | | 249000 | | 253000 | | | | | | |
| Mont Chateau | Monongalia | B-Monongahela | 42 | | - | | | x | x | x | x | x | | 78700 | | 98800 | | | | | | |
| Cathedral | Preston | B-Monongahela | 126 | | 26 | | | x | | | | | | 13500 | | 22500 | | | | | | |
| Blackwater Falls | Tucker | B-Monongahela | 1679 | | - | | | x | x | x | x | x | | 282600 | | 312500 | | | | | | |
| Watters Smith | Harrison | B-Monongahela | 278 | | - | | | x | | | | | | 14100 | | 16500 | | | | | | |
| Audra | Barbour | B-Monongahela | 355 | | 5 | | | x | | | x | | | NA | | 6000 | | | | | | |
| North Bend | Ritchie | G-Kanawha | 1405 | | 38 | | | x | x | x | x | x | | NA | | 79300 | | | | | | |
| Hawk's Nest | Fayette | G-Kanawha | 94 | | - | | | x | | | | | | 402200 | | 343300 | | | | | | |
| Cedar Creek | Gilmer | G-Kanawha | 2034 | | 9 | | | x | x | | x | x | | NA | | 37500 | | | | | | |
| Holly River | Webster | G-Kanawha | 7592 | | 10 | | | x | x | x | x | x | | 46400 | | 63400 | | | | | | |
| Carnifex Ferry | Nicholas | G-Kanawha | 156 | | - | | | x | | | | | | 26800 | | 37100 | | | | | | |
| Droop Mountain | Pocahontas | G-Kanawha | 284 | | - | | | x | | | | | | 18400 | | 36000 | | | | | | |
| Watoga | Pocahontas | G-Kanawha | 10057 | | 11 | | | x | x | x | x | x | | 43400 | | 71100 | | | | | | |
| Grandview | Raleigh | G-Kanawha | 878 | | - | | | x | | | | | | 99900 | | 192900 | | | | | | |
| Pinnacle Rock | Mercer | G-Kanawha | 152 | | - | | | x | | | | | | 52600 | | 56800 | | | | | | |
| Bluestone | Summers | G-Kanawha | 1346 | | (1970) | | | x | x | x | x | x | | (304000) | | (539000) | | | | | | |
| State Forests: | | | | | | | | | | | | | | | | | | | | | | |
| Cabwaylingo | Wayne | H-Huntington | 8036 | | 10 | | | x | x | | x | x | | 53100 | | 62300 | | | | | | |
| Greenbrier | Greenbrier | G-Kanawha | 5001 | | - | | | x | x | | x | x | | 61200 | | 45600 | | | | | | |
| Kimbrabow | Randolph | B-Monongahela | 9431 | | 25 | | | x | x | | x | | | 46200 | | 29100 | | | | | | |
| Seneca | Pocahontas | G-Kanawha | 11503 | | 5 | | | x | x | x | x | | | 8600 | | 18100 | | | | | | |
| Calvin Price | Pocahontas | G-Kanawha | 9482 | | - | | | | | | | | | NA | | 1200 | | | | | | |
| Camp Creek | Mercer | G-Kanawha | 5897 | | 1 | | | x | x | | | | | 28900 | | 41200 | | | | | | |
| Coopers Rock | Preston | B-Monongahela | 13043 | | 5 | | | x | x | | | | | 208100 | | 210800 | | | | | | |
| Kanawha | Kanawha | G-Kanawha | 6597 | | 2 | | | x | x | x | | | | 110900 | | 175200 | | | | | | |
| Panther Creek | McDowell | J-Guyandot | 7810 | | - | | | x | x | | x | | | 6200 | | 15000 | | | | | | |
| State Fish & Game Areas: | | | | | | | | | | | | | | | | | | | | | | |
| Bluestone (Bluestone Res.) | Summers | G-Kanawha | 16823 | | (1500) | | | x | x | x | x | x | | (170000) | | (200000) | | | | | | |
| Elk River (Sutton Res.) | Braxton | G-Kanawha | 16000 | | (1200) | | | | | x | | | | (3000) | | (7000) | | | | | | |
| Bear Rocks | Ohio | E-Upper Ohio | 163 | | 16 | | | x | x | | | | | 1200 | | 3100 | | | | | | |
| Teter Creek Lake | Barbour | B-Monongahela | 112 | | 34 | | | x | x | x | | | | 2100 | | 6500 | | | | | | |
| Pleasants Creek | Barbour | B-Monongahela | 1000 | | 140 | | | x | x | x | x | x | | 29600 | | 47900 | | | | | | |
| Horner | Lewis | B-Monongahela | 188 | | 1 | | | x | x | | | | | 500 | | 1200 | | | | | | |
| McClintic | Mason | H-Huntington | 2451 | | 160 | | | x | | | | | | 10000 | | 20000 | | | | | | |
| Chief Cornstalk | Mason | H-Huntington | 10052 | | 5 | | | x | x | | | | | 2400 | | 26200 | | | | | | |
| Plum Orchard Lake | Fayette | G-Kanawha | 2955 | | 202 | | | x | x | x | | | | NA | | 25400 | | | | | | |
| Laurel Creek | Mingo | J-Guyandot | 12299 | | 31 | | | x | x | x | | | | NA | | 25500 | | | | | | |
| MAJOR LOCAL | | | | | | | | | | | | | | | | | | | | | | |
| Oglebay Park | Ohio | E-Upper Ohio | 1050 | | - | | | x | | x | x | x | | NA | | NA | | | | | | |
| Crossin Park | Kanawha | G-Kanawha | 1000 | | - | | | x | | | | | | NA | | NA | | | | | | |
| Camp Mad Anthony Wayne | Wayne | H-Huntington | 311 | | - | | | x | | | x | x | | NA | | NA | | | | | | |
| Little Beaver | Raleigh | G-Kanawha | 437 | | 50 | | | x | | | x | | | NA | | NA | | | | | | |

VIRGINIA RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | |
|-----------------------------------|------------------|------------|---------|------------|--------|----------|-------------------------------|---------|---------|----------|---------|----------|------------|------------|-------|------------|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | COUNTY | SUB-AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA |
| FEDERAL | | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | | |
| Philpott Reservoir | Henry-Franklin | | 9326 | | 2000 | x | x | x | x | x | | 631200 | | 537300 | | |
| National Park Service: | | | | | | | | | | | | | | | | |
| Booker T. Washington | | | | | | | | | | | | | | | | |
| National Monument | Franklin | | 218 | | - | | | | | x | | 4000 | | 2000 | | |
| Blue Ridge Parkway | Roanoke-Floyd- | | | | | | | | | | | | | | | |
| | Carroll | G-Kanawha | 95 mi. | | - | | | | | | | 1054200* | | 1388200* | | |
| Smart View | Floyd | G-Kanawha | NA | | - | x | | | | x | | NA | | NA | | |
| Mabry Mill | Floyd | G-Kanawha | NA | | - | | | | | x | | NA | | NA | | |
| Rocky Knob | Floyd | G-Kanawha | NA | | - | x | x | | | x | x | NA | | NA | | |
| U. S. Forest Service: | | | | | | | | | | | | | | | | |
| Jefferson National Forest | Giles | G-Kanawha | 174966 | 18307 | - | - | x | x | x | x | x | NA | | 1902100 | | |
| George Washington National Forest | Alleghany, et al | | NA | | - | | | | | | | NA | | NA | | |
| STATE | | | | | | | | | | | | | | | | |
| State Parks: | | | | | | | | | | | | | | | | |
| Fairy Stone State Park | Patrick | | 4570 | | 10 | x | x | x | x | x | x | 170500 | | 165600 | | |
| Douthat State Park | Bath | | 4493 | | 70 | x | x | x | x | x | x | 100200 | | 113900 | | |
| Claytor Lake State Park | Pulaski | G-Kanawha | 472 | | - | x | x | x | x | x | x | 167500 | | 164200 | | |
| State Game and Inland | | | | | | | | | | | | | | | | |
| Fisheries Areas: | | | | | | | | | | | | | | | | |
| Gathright Wildlife Area | | | 18392 | | - | | | | | x | | 400 | | 16500 | | |

KENTUCKY RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | |
|-----------------------------------------------------|-----------------|---------------------------|---------|------------|---------|------------|-------------------------------|---------|---------|----------|---------|--------|------------|------------|-------|------------|--|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| FEDERAL | | | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | | | |
| Buckhorn Reservoir | Perry | M-Licking | 5000 | | 1250 | | x | x | x | x | x | 0600 | | 256000 | | | |
| Lake Cumberland (Wolf Creek Dam) | Russell-Clinton | S-Cumberland | 91972 | | 50250 | | x | x | x | x | x | 295100 | | 5114500 | | | |
| Dewey Reservoir | Floyd | J-Guyandot | 13000 | | 1100 | | x | x | x | x | x | 225000 | | 764700 | | | |
| National Park Service: | | | | | | | | | | | | | | | | | |
| Mammoth Cave National Park | Edmonson | P-Green | 51254 | | 060 | | x | x | x | | x | 566000 | | 745000 | | | |
| Cumberland Gap National Historical Park | Bell | S-Cumberland | 10679 | | - | | x | x | x | x | | 165400 | | 167900 | | | |
| Abraham Lincoln Birthplace National Historical Site | Larue | P-Green | 117 | | - | | | | | | x | 353700 | | 294000 | | | |
| U.S. Fish & Wildlife Service: | | | | | | | | | | | | | | | | | |
| Kentucky Wildlife National Wildlife Refuge | Lyon-Trigg | S-Cumberland | 65759 | | - | | x | x | | | x | NA | | NA | | | |
| U.S. Forest Service: | | | | | | | | | | | | | | | | | |
| Cumberland National Forest | Clark (Hqrs.) | M-Licking S-Cumberland | 460004 | | 11231 | | x | x | x | | x | 532000 | | 600000 | | | |
| Jefferson National Forest | Pike | J-Guyandot | 116 | | - | | x | | | | x | 500 | | 100 | | | |
| STATE | | | | | | | | | | | | | | | | | |
| State Parks: | | | | | | | | | | | | | | | | | |
| Pine Mountain | Bell | S-Cumberland | 2100 | | 100 | | x | x | x | x | x | 250000 | | 20700 | | | |
| Big Bone Lick | Boone | K-Cincinnati | 163 | | - | | x | | | | x | 9500 | | 40000 | | | |
| General Butler | Carroll | N-Louisville | 900 | | 90 | | x | x | x | x | x | 130000 | | 55000 | | | |
| Carter Caves | Carter | J-Guyandot | 1020 | | 90 | | x | x | x | x | x | 154000 | | 401700 | | | |
| Pennyrile Forest | Christian | S-Cumberland | 14060 | | 60 | | x | x | x | x | | 123000 | | 305000 | | | |
| Jenny Wiley | Floyd | J-Guyandot | (63000) | | (1100) | | x | x | x | x | x | 67200 | | 169000 | | | |
| Greenho Lake | Greenup | H-Huntington | 3610 | | 300 | | x | x | x | | | 236500 | | 244000 | | | |
| Audubon | Henderson | O-Evansville | 590 | | 20 | | x | x | x | x | | 240000 | | 340000 | | | |
| Levi Jackson Wilderness | Laurel | S-Cumberland | 740 | | - | | x | x | x | | | 230000 | | 160000 | | | |
| My Old Kentucky Home | Nelson | M-Licking | 240 | | - | | x | x | | | | 142000 | | 127000 | | | |
| Natural Bridge | Powell | M-Licking | 1390 | | 60 | | x | x | x | x | x | 130600 | | 200000 | | | |
| Lake Cumberland | Russell | S-Cumberland | (3000) | | (60250) | | x | x | x | x | x | 176000 | | 160000 | | | |
| Cumberland Falls | Whiteley | S-Cumberland | 1120 | | 20 | | x | x | x | x | x | 500000 | | 1000000 | | | |
| Breaks Interstate Commission: | | | | | | | | | | | | | | | | | |
| Breaks Interstate Park | Pike | J-Guyandot | 2022 | | 12 | | x | x | x | x | x | NA | | 1000 | | | |
| State Forests: | | | | | | | | | | | | | | | | | |
| Olympia | Bath | M-Licking | 799 | | - | | | | | | x | NA | | NA | | | |
| Kentucky Ridge | Bell | S-Cumberland | 11500 | | - | | | | | | x | NA | | NA | | | |
| Knots | Bulleit | N-Louisville | 4000 | | - | | | | | | x | NA | | NA | | | |
| Tygart's | Carter | J-Guyandot | 300 | | - | | | | | | x | NA | | NA | | | |
| Kenton's | Harlan | S-Cumberland | 3620 | | - | | | | | | x | NA | | NA | | | |
| Dewey Lake | Pike | J-Guyandot | 1000 | | - | | | | | | x | NA | | NA | | | |
| Pennyrile | Christian | S-Cumberland | 15200 | | - | | | | | | x | NA | | NA | | | |
| State Fish and Wildlife Areas: | | | | | | | | | | | | | | | | | |
| Beaver Creek Lake | Anderson | M-Licking | 160 | | 100 | | x | x | | | x | NA | | NA | | | |
| Jones-Kenner Case Management Area | Calwell | O-Evansville | 1690 | | - | | x | | | | x | 100 | | NA | | | |
| Lake Beesnar | Calwell | O-Evansville | 90 | | 90 | | x | x | | | x | NA | | NA | | | |
| Carpenter Lake | Davless | O-Evansville | 6 | | 60 | | x | x | | | x | NA | | 2000 | | | |
| Old Kingfisher - New Kingfisher | Davless | O-Evansville | 35 | | 35 | | x | x | | | x | NA | | NA | | | |
| Robinson Forest | Breacht | M-Licking | 10000 | | - | | x | x | | | x | NA | | NA | | | |
| Elliott County Sportsman Lake | Elliott | J-Guyandot | 20 | | 6 | | x | | | | x | NA | | NA | | | |
| Franklin County Game Area | Franklin | M-Licking | 150 | | 8 | | x | | | | x | 2000 | | 1000 | | | |

KENTUCKY RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | | |
|-------------------------------|-------------------------|--------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|------------|-------|------------|-------|------------|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | FISHING | OTHER | 1960 | | 1963 | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA |
| State Fish & Wildlife Areas: | | | | | | | | | | | | | | | | |
| (con.) | | | | | | | | | | | | | | | | |
| Boltz Lake | Grant | M-Licking | 135 | | 135 | | x | x | | | | | NA | | NA | |
| Sullock Pen Lake | Grant | M-Licking | 142 | | 142 | | x | x | | | | | NA | | 6000 | |
| Williamstown Lake | Grant | M-Licking | 305 | | 305 | | x | x | x | | | | NA | | NA | |
| Henderson Wildlife Area | Henderson | O-Evansville | 1300 | | - | | | | | | | | NA | | NA | |
| McNeeley Lake | Jefferson | N-Louisville | 53 | | 53 | | x | x | | | | | NA | | 6000 | |
| Mullins Wildlife Management | | | | | | | | | | | | | | | | |
| Area | Kenton | K-Cincinnati | 320 | | - | | x | | | | | | 5000 | | 12000 | |
| Pine Mountain Game Area | Letcher | S-Cumberland | 6000 | | - | | | | | | | | 5000 | | 12000 | |
| Central Kentucky Management | | | | | | | | | | | | | | | | |
| Area | Madison | M-Licking | 1189 | | 3 | | | | | | | | NA | | 1500 | |
| Marion County Sportsman Lake | Marion | M-Licking | 33 | | 33 | | | | | | | | NA | | 1600 | |
| Mud River No. 51* | Muhlenberg-Todd & Logan | | 1500 | | 826 | | x | x | x | | | | NA | | NA | |
| Lake Washtburn | Ohio | P-Green | 35 | | 10 | | x | x | | | | | NA | | NA | |
| Elmer Davis Lake | Owen | M-Licking | 138 | | 138 | | x | x | x | | | | NA | | 5600 | |
| Kleber Sanctuary | Owen | M-Licking | 670 | | - | | x | x | | | | | 500 | | NA | |
| Lake Malone | Muhlenberg | P-Green | 830 | | 830 | | x | x | x | | | | NA | | NA | |
| Pulaski County Lake | Pulaski | S-Cumberland | 10 | | 10 | | | | | | | | NA | | NA | |
| Guist Creek Lake | Shelby | M-Licking | 325 | | 325 | | x | x | | | | | NA | | 28800 | |
| Taylor County Sportsman Lake | Taylor | P-Green | 45 | | 37 | | x | x | | | | | NA | | 1700 | |
| Shanty Hollow Lake | Warren | P-Green | 421 | | 107 | | x | x | | | | | NA | | 6300 | |
| MAJOR LOCAL | | | | | | | | | | | | | | | | |
| Hopkinsville: | | | | | | | | | | | | | | | | |
| North Fork Little River No. 5 | Christian | S-Cumberland | 150 | | 89 | | | | | | | | NA | | NA | |

TENNESSEE RECREATION INVENTORY

| EXISTING AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | |
|----------------------------------|------------------|--------------|---------|------------|--------|------------|-------------------------------|---------|---------|----------|---------|------------|---------|------------|---------|
| | | | TOTAL | | WATER | | PICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | 1960 | | 1963 |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | £ BASIN |
| FEDERAL | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | |
| Center Hill Reservoir | DeKalb | S-Cumberland | 3552 | | 1220 | | x | x | x | x | x | | 1375100 | 1519000 | |
| Cheatnas Reservoir | Cheatnam-Dickson | S-Cumberland | 10190 | | 7400 | | x | x | x | x | x | | 661300 | 756700 | |
| Dale Hollow Reservoir | Clay | S-Cumberland | 52395 | | 27700 | | x | x | x | x | x | | 1019900 | 1093100 | |
| Old Hickory Reservoir | Davidson-Summer | S-Cumberland | 32172 | | 22500 | | x | x | x | x | x | | 3723900 | 4760300 | |
| National Park Service: | | | | | | | | | | | | | | | |
| Natchez Trace National | | | | | | | | | | | | | | | |
| Parkway | Williamson | S-Cumberland | 5502 | | - | | x | | | | | | NA | NA | |
| Pt. Donelson National | | | | | | | | | | | | | | | |
| Military Park & Cemetery | Stewart | S-Cumberland | 196 | | - | | | | | | x | | 222700 | 400400 | |
| Stones River National | | | | | | | | | | | | | | | |
| Battlefield & Cemetery | Rutherford | S-Cumberland | 324 | | - | | | | | | x | | 36100 | 33100 | |
| Tennessee Valley Authority: | | | | | | | | | | | | | | | |
| Great Falls Lake | Warren-White | S-Cumberland | 2270 | | 2270 | | | x | x | | x | | 50000 | 60000 | |
| STATE | | | | | | | | | | | | | | | |
| State Parks: | | | | | | | | | | | | | | | |
| Cedars of Lebanon | Wilson | S-Cumberland | (500) | | - | | x | x | | x | x | | 53400 | 106300 | |
| Fall Creek Falls | Van Buren | S-Cumberland | 16000 | | 10 | | x | x | | x | x | | 109100 | 203700 | |
| Standing Stone | Overton | S-Cumberland | (9345) | | (50) | | x | x | x | x | x | | 61200 | 136100 | |
| Montgomery Bell | Dickson | S-Cumberland | 3571 | | 90 | | x | x | x | x | x | | 356400 | 759600 | |
| Pickett | Pickett | S-Cumberland | 1200 | | 12 | | x | x | x | x | | | 42500 | NA | |
| State Forests: | | | | | | | | | | | | | | | |
| Stewart | Stewart | S-Cumberland | 4000 | | - | | | | | | x | | 100 | 100 | |
| Scott | Scott | S-Cumberland | 3182 | | - | | | | | | x | | 100 | 100 | |
| Cedars of Lebanon | Wilson | S-Cumberland | 7552 | | - | | | | | | | | NA | NA | |
| Standing Stone | Overton | S-Cumberland | 9345 | | 60 | | | | | | | | NA | NA | |
| State Fish and Game Areas: | | | | | | | | | | | | | | | |
| Cheatnam Game Management Area | Cheatnam | S-Cumberland | (2722) | | (31) | | x | x | | | x | | NA | 8000 | |
| Old Hickory Game Management Area | Wilson | S-Cumberland | (3523) | | (1230) | | | | | | | | NA | 6000 | |
| Cheatnam Wildlife Area | Cheatnam | S-Cumberland | 22310 | | - | | | | | | x | | 4600 | 8500 | |
| Burgess Falls State Lake | Putnam | S-Cumberland | 540 | | 400 | | x | x | x | | x | | 5300 | 4500 | |
| Marion State Lake | Davidson | S-Cumberland | 160 | | 60 | | x | x | | | x | | 5400 | 5400 | |

APPENDIX II

INVENTORY
POTENTIAL OUTDOOR RECREATION FACILITIES
OHIO RIVER BASIN

INDIANA RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | | | |
|-----------------------------------------|---------------------|--------------|---------|------------------|--------|----------|-------------------------------|---------|---------|----------|---------|------------|-----------------------|---------------------|-----------|------------|--|
| | | | TOTAL | | WATER | | FENCING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | Most Recent Available | | Projected | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | COUNTY | SUB-AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| FEDERAL | | | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | | | |
| Huntington Reservoir | Huntington | R-Wabash | NA | 900 | | | x | x | x | x | x | - | | 225000 | | | |
| Salamonie | Wabash | R-Wabash | NA | 2860 | | | x | x | x | x | x | - | | 600000 | | | |
| Mississinewa | Miami | R-Wabash | NA | 3180 | | | x | x | x | x | x | - | | 440000 | | | |
| Patoka | Dubois-Orange | Q-White | NA | 8900 | | | x | x | x | x | x | - | | 1350000 | | | |
| Clifty Creek | Bartholomew-Decatur | Q-White | NA | 220 | | | x | x | x | x | x | - | | 800000 | | | |
| Big Pine | Warren | R-Wabash | NA | 687 | | | x | x | x | x | x | - | | 500000 | | | |
| Wildcat Creek | Tippecanoe-Carroll | R-Wabash | NA | 1320 | | | x | x | x | x | x | - | | 700000 | | | |
| Big Walnut Creek | Putnam | Q-White | NA | NA | | | x | x | x | x | x | - | | - | | | |
| Downeyville | Rush | Q-White | NA | NA | | | x | x | x | x | x | - | | - | | | |
| Big Blue | Vanocok-Rush | Q-White | NA | NA | | | x | x | x | x | x | - | | - | | | |
| Brookville | Fayette | L-Miami | NA | 350 ^b | | | x | x | x | x | x | - | | 600000 ^d | | | |
| Monroe | Monroe | Q-White | NA | 10750 | | | x | x | x | x | x | - | | 700000 | | | |
| Metamora | Fayette | L-Miami | NA | NA | | | | | | | | - | | - | | | |
| U. S. Forest Service: | | | | | | | | | | | | | | | | | |
| Hooiser National Forest | | | 79560 | 162 | | | x | x | x | x | x | - | | - | | | |
| County Units | | | | | | | | | | | | | | | | | |
| Brown | Brown | Q-White | 5500 | - | | | | | | | | - | | - | | | |
| Crawford | Crawford | O-Evansville | 11120 | - | | | | | | | | - | | - | | | |
| Du Bois | Du Bois | Q-White | 6000 | - | | | | | | | | - | | - | | | |
| Jackson | Jackson | Q-White | 3500 | - | | | | | | | | - | | - | | | |
| Lawrence | Lawrence | Q-White | 6500 | - | | | | | | | | - | | - | | | |
| Martin | Martin | Q-White | 3500 | 2 | | | | | | | | - | | - | | | |
| Monroe | Monroe | Q-White | 4500 | - | | | | | | | | - | | - | | | |
| Orange | Orange | Q-White | 20280 | - | | | | | | | | - | | - | | | |
| Perry | Perry | O-Evansville | 18660 | 160 | | | | | | | | - | | - | | | |
| STATE | | | | | | | | | | | | | | | | | |
| State Park and Recreation Areas: | | | | | | | | | | | | | | | | | |
| Raccoon Lake Recreation Area | Parke | R-Wabash | 2879 | (2060) | | | x | x | x | | | | 264500 | - | | | |
| Quabache Recreation Area | Wells | R-Wabash | 76 | - | | | x | x | | | | | - | - | | | |
| McCormicks Creek State Park | Owen | Q-White | 300 | - | | | x | x | | | | | - | - | | | |
| Shakamak State Park | Sullivan | R-Wabash | 710 | 260 | | | x | x | x | x | x | | - | - | | | |
| Pokagon State Park | Steuben | | | 159 | | | - | x | x | | x | | - | - | | | |
| Chain O'Lakes State Park | Noble | | | 134 | | | - | x | x | | x | | - | - | | | |
| Tippecanoe River State Park | Piaski | R-Wabash | 80 | - | | | x | x | | | x | | - | - | | | |
| Indiana Dunes State Park | Porter | | | 210 | | | - | x | x | x | x | | - | - | | | |
| Spring Mill State Park | Lawrence | Q-White | 70 | - | | | x | | | | x | | - | - | | | |
| Lincoln State Park | Spencer | O-Evansville | 150 | 3 | | | x | | | | x | | - | - | | | |
| Versailles State Park | Ripley | K-Cincinnati | 12 | - | | | | | | | x | | - | - | | | |
| Paynetown Peninsula-Monroe | | | | | | | | | | | | | | | | | |
| Reservoir | Monroe | Q-White | 440 | - | | | x | x | x | x | x | | - | - | | | |
| Fairfax Peninsula-Monroe | | | | | | | | | | | | | | | | | |
| Reservoir | Monroe | Q-White | 773 | - | | | x | x | x | x | x | | - | - | | | |
| Turkey Run State Park | Parke | R-Wabash | 150 | - | | | x | x | | | x | | - | - | | | |
| State Forests: | | | | | | | | | | | | | | | | | |
| Yellowwood | Brown | Q-White | 22 | - | | | | | | | | x | | - | | | |
| Clark | Clark | Q-White | 360 | 192 | | | x | x | x | x | x | | - | - | | | |
| Harrison | Harrison | O-Evansville | 115 | - | | | | | | | | x | | - | | | |
| State Fish and Game Areas: | | | | | | | | | | | | | | | | | |
| Moore Creek-Monroe Reservoir | Monroe | Q-White | 170 | - | | | x | | | | x | | - | - | | | |
| Pine Grove-Monroe Reservoir | Monroe | Q-White | 170 | - | | | x | | | | x | | - | - | | | |
| Crooked Creek-Monroe Reservoir | Monroe | Q-White | 170 | - | | | x | | | | x | | - | - | | | |
| Axon Branch-Monroe Reservoir | Monroe | Q-White | 170 | - | | | x | | | | x | | - | - | | | |
| Outright Bridge-Monroe | | | | | | | | | | | | | | | | | |
| Reservoir | Monroe | Q-White | 170 | - | | | x | | | | x | | - | - | | | |
| Allen's Creek-Monroe Reservoir | Monroe | Q-White | 170 | - | | | x | | | | x | | - | - | | | |

INDIANA RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | |
|----------------------------|------------|--------------|---------|------------|-------|------------|-------------------------------|---------|------------|---------|-------|------------------------|------------|-----------|------------|
| | | | TOTAL | | WATER | | PICKNICKING CAMPING | BOATING | SUNBATHING | FISHING | OTHER | Most Benefit Available | | Projected | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA |
| State Fish and Game Areas: | | | | | | | | | | | | | | | |
| (con.) | | | | | | | | | | | | | | | |
| Glendale | Daviess | Q-White | 2600 | - | - | - | - | - | - | X | - | - | - | | |
| Crosley | Jennings | Q-White | 460 | 10 | - | - | - | - | - | X | - | - | - | | |
| Tri-County | Kosciusko | R-Wabash | 800 | - | - | - | - | - | - | X | - | - | - | | |
| Pigeon River | La Grange | | 4900 | - | 900 | - | - | X | - | X | - | - | - | | |
| Kingsbury | La Porte | | 240 | - | - | X | - | - | - | X | - | - | - | | |
| La Salle | Newton | | 340 | - | - | - | - | - | - | X | - | - | - | | |
| Willow Slough | Newton | | 1200 | - | - | - | - | - | - | X | - | - | - | | |
| Spring Valley | Orange | Q-White | 800 | - | - | - | - | - | - | X | - | - | - | | |
| Patoka | Pike | Q-White | 5300 | 300 | - | - | - | - | - | X | - | - | - | | |
| Novoy Lake | Posey | O-Evansville | 2000 | - | - | X | X | - | - | X | - | - | - | | |
| Winnac | Pulaski | | 500 | - | - | - | - | - | - | X | - | - | - | | |
| Elk Creek | Washington | Q-White | 400 | - | - | - | - | - | - | X | - | - | - | | |
| MAJOR LOCAL | | | | | | | | | | | | | | | |
| Watershed Conservation | | | | | | | | | | | | | | | |
| Districts: | | | | | | | | | | | | | | | |
| Alkman Creek * | Daviess | Q-White | 420 | 420 | - | - | - | X | X | X | X | - | 75000 | | |
| Busseron Creek * | Sullivan | R-Wabash | 400 | 375 | - | - | X | X | X | X | X | - | 105000 | | |
| Busseron Creek * | Sullivan | R-Wabash | 420 | 420 | - | - | X | X | X | X | X | - | 90000 | | |
| Big Creek * | Posey | O-Evansville | 1650 | 1650 | - | - | X | X | X | X | - | - | - | | |
| Delaney Creek * | Washington | Q-White | 200 | 101 | - | - | X | X | X | X | - | - | - | | |
| Indian Creek * | Johnson | Q-White | 1040 | 410 | - | - | X | X | X | X | - | - | - | | |
| Indian Creek * | Morgan | Q-White | NA | 190 | - | - | X | X | X | X | - | - | - | | |
| Little Raccoon * | Parke | R-Wabash | NA | 120 | - | - | X | X | X | X | - | - | - | | |
| Little Raccoon * | Montgomery | R-Wabash | NA | 360 | - | - | X | X | X | X | - | - | - | | |
| Little River * | Huntington | R-Wabash | 800 | 190 | - | - | X | X | X | X | - | - | - | | |
| Mill Creek * | Benaricks | Q-White | NA | 140 | - | - | X | X | X | X | - | - | - | | |
| Muddy Fork * | Clarke | N-Louisville | 170 | 90 | - | - | X | X | X | X | - | - | - | | |
| Muddy Fork * | Clarke | N-Louisville | 200 | 20 | - | - | X | X | X | X | - | - | - | | |
| Muddy Fork * | Clarke | N-Louisville | 120 | 20 | - | - | X | X | X | X | - | - | - | | |
| Middle Fork at Anderson * | Ferry | O-Evansville | 35 | 41 | - | - | X | X | X | X | - | 30000 | - | | |
| Prides Creek * | Pike | Q-White | 90 | 90 | - | - | X | X | X | X | - | 70000 | - | | |
| Upper Big Blue * | Henry | Q-White | 3040 | 780 | - | - | X | X | X | X | - | - | - | | |
| West Bags Creek * | Martin | Q-White | 690 | 690 | - | - | X | X | X | X | - | - | - | | |
| City of Montgomery: | | | | | | | | | | | | | | | |
| Frederic Creek * | Wayne | Q-White | 20 | 20 | - | - | X | X | X | X | - | 20000 | - | | |

OHIO RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | |
|----------------------------------------|--------------------|----------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|------------|-----------------------|------------|-----------|
| | | | TOTAL | | WATER | | PICKNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | Most Recent Available | | Projected |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN |
| FEDERAL | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | |
| Dillon Reservoir | Muskingum-Licking | F-Muskingum | NA | 133 | | | | | | | | 274500 | - | - | |
| Sig Darby Reservoir | Franklin-Darby | I-Scioto | NA | 670 | | | | | | | | - | 400000 | - | |
| Buck Creek Reservoir | Clara | L-Miami | NA | 101 | | | | | | | | - | 500000 | - | |
| Dear Creek Reservoir | Pickaway-Fayette | I-Scioto | NA | 727 | | | | | | | | - | 35000 | - | |
| Frezeysburg Reservoir | Muskingum-Licking | F-Muskingum | NA | 47 | | | | | | | | - | - | - | |
| West Branch Reservoir | Portage | | NA | | 2550 | | | | | | | - | - | 850000 | |
| Cesar Reservoir | Warren | L-Miami | NA | 704 | | | | | | | | - | 1010000 | - | |
| Paint Creek Reservoir | Ross-Highland | I-Scioto | NA | 71 | | | | | | | | - | 225000 | - | |
| White Oak Reservoir | Brown | K-Cincinnati | NA | 28 | | | | | | | | - | 575000 | - | |
| Utica Reservoir | Knox | F-Muskingum | NA | 1900 | | | | | | | | - | 300000 | - | |
| Raccoon Creek Reservoir | Licking | F-Muskingum | NA | 340 | | | | | | | | - | 81000 | - | |
| Conser Run Reservoir | Columbiana | F-Muskingum | NA | 158 | | | | | | | | - | 60000 | - | |
| Hugle Run Reservoir | Stark | F-Muskingum | NA | 235 | | | | | | | | - | 1800000 | - | |
| Middle Branch Reservoir | Stark | F-Muskingum | NA | 290 | | | | | | | | - | 180000 | - | |
| Muddy Fork Reservoir | Carrroll | F-Muskingum | NA | 300 | | | | | | | | - | 42000 | - | |
| Still Fork Reservoir | Carrroll | F-Muskingum | NA | 300 | | | | | | | | - | 36000 | - | |
| Lowan Reservoir | Fairfield-Hocking | I-Scioto | NA | 400 | | | | | | | | - | 1100000 | - | |
| Lake Fork Reservoir | Licking | F-Muskingum | NA | 425 | | | | | | | | - | - | - | |
| Lake Erie-Ohio River Canal | Ashtabula-Trumbull | D-Beaver | NA | 6636 | | | | | | | | - | 20000000 | - | |
| Baryus Reservoir | Crawford | | NA | | 100 | | | | | | | - | - | - | |
| Tooth Park Reservoir | Cuyahoga | | NA | | 280 | | | | | | | - | - | 10000000 | |
| Finkers Creek Reservoir | Cuyahoga | | NA | | 14 | | | | | | | - | - | - | |
| East Fork Reservoir | Clermont | L-Little Miami | NA | 790 | | | | | | | | 867000 | 1900000 | - | |
| Salt Creek Reservoir | Ross-Vinton | I-Scioto | NA | 860 | | | | | | | | - | 750000 | - | |
| Alum Creek Reservoir | Delaware | I-Scioto | NA | 380 | | | | | | | | - | 1100000 | - | |
| Mill Creek Reservoir | Delaware | I-Scioto | NA | NA | | | | | | | | - | 500000 | - | |
| Federal Creek | Athens | E-Ohio | NA | 1550 | | | | | | | | - | 600000 | - | |
| Munday Creek Reservoir | Hocking | I-Scioto | NA | 138 | | | | | | | | - | 450000 | - | |
| Sugar Grove Reservoir | Fairfield | I-Scioto | NA | 850 | | | | | | | | - | 720000 | - | |
| McLeish Reservoir | Athens | E-Ohio | NA | 400 | | | | | | | | - | 180000 | - | |
| U.S. Forest Service: | | | | | | | | | | | | | | | |
| Wayne National Forest | | | 72220 | 2995 | | | X | X | X | X | X | X | - | - | |
| County Units | | | | | | | | | | | | | | | |
| Athens | Athens | E-Ohio | 8400 | 500 | | | | | | | | - | - | - | |
| Gallia | Gallia | H-Huntington | 2000 | 200 | | | | | | | | - | - | - | |
| Hocking | Hocking | I-Scioto | 3640 | - | | | | | | | | - | - | - | |
| Lawrence | Lawrence | H-Huntington | 23540 | 470 | | | | | | | | - | - | - | |
| Monroe | Monroe | E-Ohio | 12640 | 425 | | | | | | | | - | - | - | |
| Perry | Perry | F-Muskingum | 6500 | - | | | | | | | | - | - | - | |
| Scioto | Scioto | H-Huntington | 5100 | 490 | | | | | | | | - | - | - | |
| Washington | Washington | E-Ohio | 10200 | 510 | | | | | | | | - | - | - | |
| U.S. Fish & Wildlife Service: | | | | | | | | | | | | | | | |
| Ottawa National Wildlife Refuge | | | | 200 | | | | | | | | - | - | - | |
| STATE | | | | | | | | | | | | | | | |
| State Parks: | | | | | | | | | | | | | | | |
| Clear Fork | Ashland | F-Muskingum | 100 | - | | | X | X | | X | - | - | - | - | |
| Burr Oak | Athens | E-Ohio | 300 | - | | | X | | | X | - | - | - | - | |
| St. Mary's | Auglaize | | | 300 | | | X | X | | X | - | - | - | - | |
| Huston Woods | Butler | L-Miami | 1200 | - | | | X | | | X | - | - | - | - | |
| Kiser Lake | Champaign | L-Miami | 80 | - | | | | | | X | - | - | - | - | |
| Stonelick | Clermont | K-Cincinnati | 40 | - | | | X | X | X | X | - | - | - | - | |
| Cowan Lake | Clinton | L-Miami | 200 | - | | | X | X | | X | - | - | - | - | |
| Beaver Creek | Columbiana | E-Ohio | 2000 | - | | | X | X | | X | - | - | - | - | |
| Guilford Lake | Columbiana | E-Ohio | 200 | - | | | X | | | X | - | - | - | - | |
| Independence Dam | Defiance | | 1000 | - | | | X | X | | X | - | - | - | - | |

OHIO RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | |
|------------------------------|-----------------|--------------|---------|------------|--------|----------|-------------------------------|---------|---------|----------|---------|-------|-----------------------|------------|-----------|------------|--|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | Most Recent Available | | Projected | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | COUNTY | SUB-AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| State Parks: (con.) | | | | | | | | | | | | | | | | | |
| Kelly's Island | Erie | | | 10 | | | | X | X | X | | | | | | | |
| Buckeye | Fairfield | I-Scioto | 1000 | | | | | | | | | X | | | | | |
| Harrison Lake St. Reservoir | Fulton | | | 200 | | | | X | | | | X | | | | | |
| Punderson Lake | Geauga | | | 300 | | | | X | X | | | X | | | | | |
| John Bryan | Greene | I-Miami | 100 | | | | | X | | | | X | | | | | |
| Salt Fork Rec. Area | Guernsey | F-Muskingum | 20500 | | 2950 | | | X | X | X | X | X | X | | | | |
| Rocky Fork | Highland | I-Scioto | 400 | | | | | X | | | | X | | | | | |
| Hocking | Hocking | I-Scioto | 12500 | | | | | X | X | | | X | | | | | |
| Indian Lake | Logan | I-Miami | 140 | | | | | X | | | | X | | | | | |
| River Styx Rec. Area | Medina | | | 774 | | 301 | | X | X | X | X | X | | | | | |
| East Harbor | Ottawa | | | 30 | | | | X | | | | | | | | | |
| A.W. Marion | Pickaway | I-Scioto | 300 | | | | | X | | | | X | | | | | |
| Pike Lake | Pike | H-Huntington | 200 | | | | | X | X | | | X | | | | | |
| Nelson-Kennedy Ledges | Portage | | | 250 | | | | X | | | | X | | | | | |
| Miller Blue Hole | Sandusky | | | 100 | | | | X | | | | X | | | | | |
| Lake Lorain | Shelby | I-Miami | 400 | | | | | X | X | | | X | | | | | |
| Portage Lake | Summit | | | 34 | | | | X | | | | X | | | | | |
| State Forests: | | | | | | | | | | | | | | | | | |
| Brush Creek | Adams | K-Cincinnati | 3000 | | | | | X | X | | | X | | | | | |
| Mohican | Ashland | F-Muskingum | 6000 | | | | | X | X | | | X | | | | | |
| Yellow Creek | Columbiana | E-Ohio | 19000 | | | | | X | X | | | X | | | | | |
| Maumee | Fulton | | | 6000 | | | | X | X | | | X | | | | | |
| Richland Furnace | Jackson | H-Huntington | 7500 | | | | | X | | | | X | | | | | |
| Shade River | Meigs | H-Huntington | 400 | | | | | X | X | | | X | | | | | |
| Sunfish Creek | Monroe | E-Ohio | 4000 | | | | | X | X | | | X | | | | | |
| Blue Creek | Muskingum | F-Muskingum | 1000 | | | | | X | X | | | X | | | | | |
| Pike | Pike | H-Huntington | 15000 | | | | | X | X | | | X | | | | | |
| Scioto | Ross | I-Scioto | 6000 | | | | | X | | | | X | | | | | |
| Shawnee | Scioto | H-Huntington | 24000 | | | | | X | X | | | X | | | | | |
| Raccoon | Vinton | H-Huntington | 4500 | | | | | X | X | | | X | | | | | |
| Zaleski | Vinton | H-Huntington | 7000 | | | | | X | X | | | X | | | | | |
| State Fish & Wildlife Areas: | | | | | | | | | | | | | | | | | |
| Tranquility Wildlife Area | Adams | K-Cincinnati | 1500 | | | | | X | X | | | X | | | | | |
| New Wildlife Area | Athens | E-Ohio | 100 | | | | | | X | | | X | | | | | |
| Indian Creek Wildlife | Brown | K-Cincinnati | 2500 | | | | | X | X | | | X | | | | | |
| New Area | Butler | I-Miami | 100 | | | | | | X | | | X | | | | | |
| New Area | Champaign | I-Miami | 80 | | | | | | | | | X | | | | | |
| Urban Game Farm | Champaign | I-Miami | 300 | | | | | X | | | | X | | | | | |
| Highlandtown | Columbiana | E-Ohio | 1329 | | | | | X | X | X | | X | | | | | |
| Mohican River | Coshacton | F-Muskingum | 48 | | | | | X | X | X | | X | | | | | |
| New Area | Crawford | | | 16 | | | | | | | | X | | | | | |
| Darke Co. | Darke | I-Miami | 361 | | | | | | | | | X | X | | | | |
| Resthaven | Erie | | | 60 | | | | X | | | | X | | | | | |
| Tycoon Lake | Gallia | H-Huntington | 2 | | | | | | X | | | X | | | | | |
| Springvalley | Greene | I-Miami | 800 | | | | | | | | | X | | | | | |
| New Area | Hamilton | K-Cincinnati | 100 | | | | | | | | | X | | | | | |
| New Area | Hardin | I-Scioto | 100 | | | | | | | | | X | | | | | |
| New Area | Henry | | | 100 | | | | | | | | X | | | | | |
| Fallsville | Highland | I-Scioto | 1050 | | | | | X | X | | | X | | | | | |
| New Area | Holmes | F-Muskingum | 486 | | | | | | X | X | | X | | | | | |
| Cooper Hollow | Jackson | H-Huntington | 1200 | | | | | X | X | X | | X | | | | | |
| Brush Creek | Jefferson | E-Ohio | 1615 | | | | | X | X | | | X | | | | | |
| New Natural Area | Lake | | | 800 | | 200 | | | | | | X | | | | | |
| New Area | Logan-Champaign | I-Miami | 161 | | | | | X | X | | | X | | | | | |
| Big Island | Marion | I-Scioto | 1006 | | | | | | | | | X | | | | | |
| Spencer Lake | Medina | | | 700 | | | | X | | | | X | | | | | |
| New Area | Mercer | | | 100 | | | | | | | | X | | | | | |
| St. Marys | Mercer | | | 1000 | | | | | | | | X | | | | | |

OHIO RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | |
|---------------------------------------|------------|--------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|-------|-----------------------|------------|-----------|------------|--|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LOGGING | OTHER | Most Recent Available | | Projected | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| Fish & Wildlife Areas: (con.) | | | | | | | | | | | | | | | | | |
| Wolf Creek | Morgan | F-Muskingum | 1600 | | | | x | x | | | | x | - | - | | | |
| New Area | Ottawa | | | 50 | | | x | x | | | | x | - | - | | | |
| New Area | Ottawa | | | 750 | | | x | x | | | | x | - | - | | | |
| New Area | Pike | B-Huntington | 32 | | | | | | x | | | x | - | - | | | |
| New Area | Portage | | | 85 | | | | | | | | x | - | - | | | |
| Rush Run | Preble | L-Miami | 450 | | | | x | | | | | x | - | - | | | |
| New Area | Putnam | | | 100 | | | | | | | | x | - | - | | | |
| New Area | Ross | I-Scioto | 26 | | | | | | x | | | x | - | - | | | |
| Tar Hollow | Ross | I-Scioto | 14000 | | | | x | x | | | | x | - | - | | | |
| New Area | Sandusky | | | 220 | | | | | | | | x | - | - | | | |
| New Area | Seneca | | | 399 | | | | | x | | | x | - | - | | | |
| Grand River | Trumbull | D-Beaver | 4000 | | | | x | x | | | | x | - | - | | | |
| New Area | Van Wert | | | 100 | | | | | | | | x | - | - | | | |
| New Area | Williams | | | 400 | | | | | | | | x | - | - | | | |
| Beaver Creek | Williams | | | 52 | | | | | | | | x | - | - | | | |
| New Area | Wood | | | 100 | | | | | | | | x | - | - | | | |
| Killdeer | Wyandot | | | 436 | | | x | | | | | x | - | - | | | |
| MAJOR LOCAL | | | | | | | | | | | | | | | | | |
| Charles Mill Reservoir | Ashland | F-Muskingum | 20 | | | | x | x | x | x | | x | - | - | | | |
| City Park-Springfield | Clark | L-Miami | 1015 | | 415 | | x | x | | | | x | - | - | | | |
| City Park-Columbus | Franklin | I-Scioto | 400 | | 300 | | x | x | x | x | | x | - | - | | | |
| City Park-Cincinnati | Hamilton | K-Cincinnati | 1000 | | 100 | | x | x | | | | x | - | - | | | |
| Harrison Co. Reclamation Area | Harrison | F-Muskingum | 4000 | | | | | | | | | x | - | - | | | |
| Jefferson Co. Reclamation Area | Jefferson | E-Ohio | 4000 | | | | x | | | | | x | - | - | | | |
| Lake Co. Metro. Park | Lake | | 1000 | | 20 | | x | x | | | | x | - | - | | | |
| Lorain Metro. Park | Lorain | | 1237 | | 200 | | x | x | x | | | x | - | - | | | |
| Lorain Metro. Park | Lorain | | 1483 | | 130 | | x | | | | | x | - | - | | | |
| City Park-Dayton | Montgomery | L-Miami | 975 | | 100 | | x | x | | | | x | - | - | | | |
| City Park-Natural Area | Paulding | | | 1550 | | 50 | x | x | x | | | x | - | - | | | |
| Perry Co. Reclamation Area | Perry | F-Muskingum | 8000 | | | | | | | | | x | - | - | | | |
| City Park-Akron | Portage | | | 2050 | | 750 | x | x | x | x | | x | - | - | | | |
| City Park-Akron | Summit | | | 300 | | 50 | x | x | x | x | | x | - | - | | | |
| Wayne County Commissioners: | | | | | | | | | | | | | | | | | |
| Chippewa* | Wayne | F-Muskingum | 141 | | 24 | | x | x | x | x | | | - | - | 41750 | | |
| Watered Conservation Districts: | | | | | | | | | | | | | | | | | |
| Chippewa * | Medina | | | 775 | | 301 | x | x | x | x | | | - | - | 120000 | | |
| Margaret Creek * | Athens | E-Ohio | 205 | | 120 | | x | x | x | x | | | - | - | 31250 | | |
| Ohio Department of Natural Resources: | | | | | | | | | | | | | | | | | |
| West Fork Duck Creek * | Noble | F-Muskingum | 1142 | | 195 | | x | x | x | x | | | - | - | 60500 | | |

PENNSYLVANIA RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | |
|------------------------------------------------|---------------|---------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|--------|-----------------------|------------|-----------|------------|--|
| | | | TOTAL | | WATER | | FISHING | CAMPING | BOATING | SWIMMING | LOCOMBS | OTHER | Most Recent Available | | Projected | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| FEDERAL | | | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | | | |
| Curwensville Reservoir | Clearfield | | | 2644 | | 540 | x | x | x | x | x | | | | | | |
| Allegheny Reservoir | Warren-McKean | A-Allegheny | NA | 12050 | | | x | x | x | x | x | | 1750000 | | | | |
| Shenango Reservoir | Mercer | D-Beaver | NA | 3560 | | | x | x | x | x | x | | 2250000 | | | | |
| Union City Reservoir | Erie | | NA | | 2260 | | x | x | x | x | x | | | | | | |
| Muddy Creek Reservoir | Crawford | A-Allegheny | NA | 1230 | | | x | x | x | x | x | | | | | | |
| Woodcock Reservoir | Crawford | A-Allegheny | NA | 103 | | | x | x | x | x | x | | 130000 | | | | |
| Redbank Creek Reservoir | Armstrong | A-Allegheny | NA | 225 | | | x | x | x | x | x | | | | | | |
| Blanchard Reservoir | Centre | | | 7500 | | 1730 | x | x | x | x | x | | | | | | |
| National Park Service: | | | | | | | | | | | | | | | | | |
| Allegheny Portage-Johnstown | | | | | | | | | | | | | | | | | |
| Flood | Cambria | A-Allegheny | 1005 | | 5 | | x | | | | x | | 75000 | | | | |
| STATE | | | | | | | | | | | | | | | | | |
| State Parks and Forests: | | | | | | | | | | | | | | | | | |
| Moraine | Butler | D-Beaver | 14758 | | 3200 | | x | x | x | x | x | | | | | | |
| Ohioyle | Fayette | B-Monongahela | 18500 | | 150 | | x | x | x | x | x | | | | | | |
| Ryersop Station | Greene | B-Monongahela | 1104 | | 61 | | x | x | x | x | x | | | | | | |
| Prince Gallitain | Cambria | A-Allegheny | 6600 | | 1740 | | x | x | x | x | x | 590800 | | | | | |
| Yellow Creek | Indiana | A-Allegheny | 2708 | | 699 | | x | x | x | x | x | | | | | | |
| Cane Creek | Blair | | | 790 | | 190 | x | x | x | x | x | | | | | | |
| Octocoin | Clearfield | | | 49175 | | 1432 | x | x | x | x | x | | | | | | |
| Buffalo Creek | Armstrong | A-Allegheny | 10002 | | 155 | | x | x | x | x | x | | | | | | |
| Elk Creek | Erie | | | 850 | | 50 | | x | | | x | | | | | | |
| Oil Creek Gorge | Venango | A-Allegheny | 8676 | | 120 | | x | x | x | x | x | | | | | | |
| Sandy Creek | Mercer | D-Beaver | 3500 | | 1740 | | x | x | x | x | x | | | | | | |
| Comenagh Gorge | Westmoreland | C-Pittsburgh | 1500 | | 100 | | | | | | x | | | | | | |
| Sandy Creek | Fayette | B-Monongahela | 2500 | | 1700 | | x | x | x | x | x | | | | | | |
| State Fish Commission | | | | | | | | | | | | | | | | | |
| Recreation Areas: | | | | | | | | | | | | | | | | | |
| Walnut Creek | Erie | | | 12 | | | x | x | x | x | x | | 15000 | | | | |
| Tamarack Lake | Crawford | A-Allegheny | 825 | | 560 | | | | | | x | | | | | | |
| Raystown | Huntingdon | | | 11 | | | | | | | x | | 4300 | | | | |
| Meadow Ground | Fulton | | | 350 | | 243 | | | | | x | | 2200 | | | | |
| MAJOR LOCAL | | | | | | | | | | | | | | | | | |
| Washington Co. Planning Comm: | | | | | | | | | | | | | | | | | |
| Unnamed | Washington | C-Pittsburgh | 2275 | | | | x | x | x | x | x | | | | | | |
| Westmoreland Co. Recreation Commission: | | | | | | | | | | | | | | | | | |
| Unnamed | Westmoreland | C-Pittsburgh | 300 | | | | x | x | x | x | x | | | | | | |
| Watershed Program (State): | | | | | | | | | | | | | | | | | |
| Wheeling Creek* | Greene et al | B-Monongahela | 20180 | | 19000 | | x | x | x | x | x | | | | | | |
| Harmon Creek* | Washington | C-Pittsburgh | 150 | | 50 | | | | | | x | | 10000 | | | | |
| Sandy Creek* | Mercer | D-Beaver | 4000 | | 1700 | | x | x | x | x | x | | 200000 | | | | |
| Little Shenango* | Crawford | A-Allegheny | 1800 | | 625 | | | | | | | | 10920 | | | | |
| Dunlap Creek* | Fayette | B-Monongahela | 150 | | 150 | | | | | | x | | 10000 | | | | |
| Cross Creek* | Washington | C-Pittsburgh | 600 | | 200 | | x | x | x | x | x | | 40000 | | | | |
| Jacobs Creek* | Westmoreland | C-Pittsburgh | 400 | | 150 | | x | x | x | x | x | | 20000 | | | | |

NEW YORK RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | | | |
|--------------------------------------------|------------|-------------|---------|------------|-------|------------|-------------------------------------|---------|---------|----------|---------|------------|-----------------------|------------|-----------|------------|---|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | Most Recent Available | | Projected | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| STATE | | | | | | | | | | | | | | | | | |
| Genesee St. Park Commission: | | | | | | | | | | | | | | | | | |
| Silver Lake State Park | Wyoming | | | 403 | | 30 | x | x | x | x | x | | | 3800 | | | - |
| Niagara Frontier State Park Commission: | | | | | | | | | | | | | | | | | |
| Four Mile Creek Annex | Niagara | | | 240 | | - | x | x | x | x | x | | | 54950 | | | - |
| Reservoir Park | Niagara | | | 134 | | - | x | | | | x | | | - | | | - |
| Lower Niagara State Park | Niagara | | | 261 | | - | x | x | x | x | x | | | - | | | - |
| Fort Niagara State Park | Niagara | | | 200 | | - | x | x | x | x | x | | | - | | | - |
| Wilson Tuscarora State Park | Niagara | | | 200 | | - | x | x | x | x | | | | - | | | - |
| Golden Hill State Park | Niagara | | | 378 | | 2 | x | x | | | x | | | 9900 | | | - |
| Allegany State Park Commission: | | | | | | | | | | | | | | | | | |
| Long Point | Chautauqua | A-Allegheny | | 320 | | - | | x | x | x | x | - | | - | | | - |
| State Fish and Game: | | | | | | | | | | | | | | | | | |
| Silver Lake | Wyoming | | | 10 | | - | x | | | | x | | | - | | | - |

WEST VIRGINIA RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | |
|----------------------------------|------------|------------------|---------|------------|-------|------------|-------------------------------|---------|---------|----------|---------|------------|-----------------------|------------|-----------|
| | | | TOTAL | | WATER | | FENCING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | Most Recent Available | | Projected |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN |
| FEDERAL | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | |
| Keweenaw Reservoir | Preston | B-Monongahela | NA | 7170 | | | X | X | X | X | X | - | - | 600000 | |
| Stonewall Jackson Reservoir | Lewis | B-Monongahela | NA | 2530 | | | X | X | X | X | X | - | - | 265000 | |
| Burnsville Reservoir | Braxton | G-Kanawha | NA | 1050 | | | X | X | X | X | X | - | - | 275000 | |
| West Fork Reservoir | Foane | G-Kanawha | NA | 1285 | | | X | X | X | X | X | - | - | 225000 | |
| Leading Creek Reservoir | Gilmer | G-Kanawha | NA | 1050 | | | X | X | X | X | X | - | - | 350000 | |
| Summersville Reservoir | Nicholas | G-Kanawha | NA | NA | | | X | X | X | X | X | - | - | 300000 | |
| East Lynn Reservoir | Wayne | H-Huntington | NA | 1005 | | | X | X | X | X | X | - | - | 250000 | |
| Birch Reservoir | Braxton | G-Kanawha | NA | 840 | | | X | X | X | X | X | - | - | NA | |
| Beech Fork Reservoir | Wayne | H-Huntington | NA | 800 | | | X | X | X | X | X | - | - | 150000 | |
| West Fork River Reservoir | Lewis | B-Monongahela | NA | 3340 | | | X | X | X | X | X | - | - | NA | |
| Justice Reservoir | Wyoming | J-Guyandot | NA | 700 | | | X | X | X | X | X | - | - | 185000 | |
| STATE | | | | | | | | | | | | | | | |
| State Park and Recreation | | | | | | | | | | | | | | | |
| Areas: | | | | | | | | | | | | | | | |
| Canaan Valley | Tucker | B-Monongahela | 5000 | 500 | | | X | X | X | X | X | - | - | - | |
| Pricketts Creek | Marion | B-Monongahela | 250 | 50 | | | X | X | X | X | X | - | - | - | |
| Valley Falls | Marion | B-Monongahela | 1150 | 50 | | | X | X | X | X | X | - | - | - | |
| Little Kanawha River | Wirt | G-Little Kanawha | 2500 | - | | | X | X | X | X | X | - | - | - | |
| North Bend | Ritchie | G-Little Kanawha | 1000 | - | | | X | X | X | X | X | - | - | - | |
| Mill Creek | Cabell | H-Huntington | 2600 | - | | | X | X | X | X | X | - | - | - | |
| Bug Run | Mason | H-Huntington | 3050 | - | | | X | X | X | X | X | - | - | - | |
| Lower Kanawha River | Mason | H-Huntington | 2000 | - | | | X | X | X | X | X | - | - | - | |
| River Bend | Jackson | H-Huntington | 2500 | - | | | X | X | X | X | X | - | - | - | |
| Hawks Nest | Fayette | G-Kanawha | 500 | - | | | X | X | X | X | X | - | - | - | |
| Cedar Creek | Gilmer | G-Kanawha | 500 | - | | | X | X | X | X | X | - | - | - | |
| Holly River | Webster | G-Kanawha | 1500 | - | | | X | X | X | X | X | - | - | - | |
| Babcock | Fayette | G-Kanawha | 1000 | - | | | X | X | X | X | X | - | - | - | |
| Pipestem | Summers | G-Kanawha | 4500 | 500 | | | X | X | X | X | X | - | - | - | |
| Smoke Hole | Pendleton | | | 4500 | | | 500 | X | X | X | X | - | - | - | |
| Falls Mill | Braxton | G-Kanawha | 1000 | - | | | X | X | X | X | X | - | - | - | |
| Twin Falls | Wyoming | J-Guyandot | 4000 | - | | | X | X | X | X | X | - | - | - | |
| Berwind Lake | McDowell | J-Guyandot | 5000 | - | | | X | X | X | X | X | - | - | - | |
| State Forests: | | | | | | | | | | | | | | | |
| Coopers Rock | Preston | B-Monongahela | 10000 | - | | | X | X | X | X | X | - | - | - | |
| Kanawha | Kanawha | G-Kanawha | 16000 | - | | | X | X | X | X | X | - | - | - | |
| Calvin W. Price | Pocahontas | G-Kanawha | 5000 | - | | | X | X | X | X | X | - | - | - | |
| Kumbrabow | Randolph | B-Monongahela | 10000 | - | | | X | X | X | X | X | - | - | - | |
| Seneca | Pocahontas | G-Kanawha | 8500 | - | | | X | X | X | X | X | - | - | - | |
| Greenbrier | Greenbrier | G-Kanawha | 14000 | - | | | X | X | X | X | X | - | - | - | |
| Panther | McDowell | J-Guyandot | 10000 | - | | | X | X | X | X | X | - | - | - | |
| Camp Creek | Mercer | G-Kanawha | 14000 | - | | | X | X | X | X | X | - | - | - | |
| Cabwalyngo | Wayne | H-Huntington | 18500 | - | | | X | X | X | X | X | - | - | - | |
| State Fish and Game Area: | | | | | | | | | | | | | | | |
| Stony River Dam | Grant | | | 2800 | | | 800 | X | X | X | X | X | - | - | |
| Pleasants Creek | Harbour | B-Monongahela | 2000 | - | | | X | X | X | X | X | - | - | - | |
| McClintic | Mason | H-Huntington | 2000 | - | | | X | X | X | X | X | - | - | - | |
| Chief Cornstalk | Mason | H-Huntington | 1000 | - | | | X | X | X | X | X | - | - | - | |
| Big Ugly | Lincoln | J-Guyandot | 12000 | - | | | X | X | X | X | X | - | - | - | |
| Elk River-Francis | Clay | G-Kanawha | 55000 | - | | | X | X | X | X | X | - | - | - | |
| Fork Creek | Boone | G-Kanawha | 10000 | - | | | X | X | X | X | X | - | - | - | |
| Back Fork of Elk | Webster | G-Kanawha | 1000 | - | | | X | X | X | X | X | - | - | - | |
| Bluestone | Summers | G-Kanawha | 2000 | - | | | X | X | X | X | X | - | - | - | |
| Laurel Creek | Mingo | J-Guyandot | 522 | 31 | | | X | X | X | X | X | - | - | - | |
| Brush Creek Falls | Mercer | G-Kanawha | 60 | 19 | | | X | X | X | X | X | - | - | - | |

KENTUCKY RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | VISITATION | | | |
|-----------------------------------|----------------------|--------------|-------------------|--------------------|-------|------------|-------------------------------|---------|---------|----------|---------|------------|-----------------------|----------------------|-----------|
| | | | TOTAL | | WATER | | PICKNICKING | CAMPING | BOATING | SWIMMING | LOGGING | OTHER | Most Recent Available | | Projected |
| | COUNTY | SUB-AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN |
| FEDERAL | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | |
| Barkley Reservoir | Lyon-Livingston | S-Cumberland | NA | 5800 ⁰ | | | | | | | | | | 1300000 ^d | |
| Barren Reservoir | Barren-Allen | P-Green | 2010 ⁴ | 10000 ⁴ | x | x | x | x | x | | | 201000 | | 550000 ^d | |
| Big Half Mountain Reservoir | Magoffin | M-Licking | NA | 2400 ⁴ | | | | | | | | | | 450000 ^d | |
| Booneville Reservoir | Owsley | M-Licking | NA | 1100 ⁰ | | | | | | | | | | 170000 ⁰ | |
| Cave Run Reservoir | Rowan-Bath | M-Licking | NA | 8200 ⁰ | | | | | | | | | | 980000 ⁰ | |
| Carr Fork Reservoir | Knott | M-Licking | NA | 1030 ⁰ | | | | | | | | | | 400000 ⁰ | |
| Celina Dam Reservoir | Monroe | S-Cumberland | NA | 13150 ⁰ | | | | | | | | | | - | |
| Eagle Creek Reservoir | Grant | M-Licking | NA | 900 ⁰ | | | | | | | | | | 340000 ⁰ | |
| Falmouth Reservoir | Pendleton | M-Licking | NA | 12300 ⁰ | | | | | | | | | | - | |
| Fishtrap Reservoir | Pike | J-Guyandot | NA | 1130 ⁰ | | | | | | | | | | 300000 ⁰ | |
| Grayson Reservoir | Carter | J-Guyandot | NA | 2500 ⁰ | | | | | | | | | | 300000 ⁰ | |
| Green River Reservoir | Taylor | P-Green | NA | 8200 ⁰ | | | | | | | | | | 650000 ⁰ | |
| Kinniconick Creek Reservoir | Lewis | H-Huntington | NA | 1160 ⁰ | | | | | | | | | | 600000 ⁰ | |
| Laurel Reservoir | Whitley-Laurel | S-Cumberland | NA | 3380 ⁰ | | | | | | | | | | 320000 ⁰ | |
| Nolin Reservoir | Edmondson | P-Green | 1341 ⁰ | 5795 ⁰ | x | x | x | x | x | | | 208800 | | 320000 ⁰ | |
| Paintsville Reservoir | Johnson | J-Guyandot | NA | NA | | | | | | | | | | 300000 ⁰ | |
| Red River Reservoir | Powell | M-Licking | NA | 1930 ⁰ | | | | | | | | | | 600000 ⁰ | |
| Rough River Reservoir | Breckinridge-Grayson | N-Louisville | 9235 ⁰ | 4375 ⁰ | x | x | x | x | x | x | | 650000 | | - | |
| Taylorville Reservoir | Spencer | M-Licking | NA | 1500 ⁰ | | | | | | | | | | - | |
| Yatesville Reservoir | Lawrence | J-Guyandot | NA | NA | | | | | | | | | | 400000 ⁰ | |
| Rockcastle Narrows Reservoir | Laurel-Pulaski | S-Cumberland | NA | 2050 ⁰ | | | | | | | | | | - | |
| Parker Branch Reservoir | Laurel-Rockcastle | S-Cumberland | NA | 5000 ⁰ | | | | | | | | | | - | |
| Martins Fork Reservoir | Harlan | S-Cumberland | NA | 370 ⁰ | | | | | | | | | | - | |
| Cumberland Falls Reservoir | McCreary | S-Cumberland | NA | 2760 ⁰ | | | | | | | | | | - | |
| Jellico Creek Reservoir | Whitley | S-Cumberland | NA | 5900 ⁰ | | | | | | | | | | - | |
| STATE | | | | | | | | | | | | | | | |
| State Parks: | | | | | | | | | | | | | | | |
| Kingdom Come | Harlan | S-Cumberland | 905 | 5 | x | | | | | | | | | - | |
| Rough River Dam | Grayson | P-Green | (500) | - | x | x | x | x | x | x | | 740700 | | - | |
| Lake Malone | Logan | P-Green | 305 | - | x | x | x | x | | | | 32800 | | - | |
| Fort Boones Borough | Madison | M-Licking | 90 | - | x | x | x | x | | | | 100000 | | - | |
| Falmouth Lake | Pendleton | M-Licking | 700 | 150 | x | x | x | x | | | | 172200 | | - | |
| General Burnside | Pulaski | S-Cumberland | 500 | - | x | x | x | x | | | | 2000 | | - | |
| Barkley Lake | Trigg | S-Cumberland | (1800) | - | x | x | x | x | | | | - | | - | |
| Elizabethtown Lake | Hardin | P-Green | 200 | 85 | x | x | x | x | | | | - | | - | |
| Unnamed Area | Estill | M-Licking | 250 | - | x | x | x | x | | | | - | | - | |
| Big Bone Lick | Boone | K-Cincinnati | 163 | - | x | | | | | | | 53100 | | - | |
| Greenbo Lake | Greenup | H-Huntington | 3610 | 380 | x | x | x | x | | | | 294600 | | - | |
| Buckhorn Lake | Perry | M-Licking | 1800 | - | x | x | x | x | | | | - | | - | |
| Barren River | Allen-Barren | P-Green | 1200 | - | x | x | x | x | x | | | - | | - | |
| State Fish and Wildlife Areas: | | | | | | | | | | | | | | | |
| Beech Creek Lake | Clay | M-Licking | 60 | 50 | x | | | | | | | - | | - | |
| Stone Mt. Wildlife Area | Harlan | S-Cumberland | 1525 | - | x | | | | | | | - | | - | |
| Twin Eagle | Owne | M-Licking | 160 | 10 | x | | | | | | | - | | - | |
| MAJOR LOCAL | | | | | | | | | | | | | | | |
| City of Lexington | Fayette | M-Licking | 900 | 231 | x | | | | | | | - | | - | |
| Watershed Conservation Districts: | | | | | | | | | | | | | | | |
| Little Kentucky River No. 1* | Henry | M-Licking | 405 | 138 | x | x | x | x | | | | - | | - | |
| Cypress Creek No. 3* | Union | O-Evansville | 105 | 49 | x | x | x | | | | | - | | - | |
| Donaldson Creek No. 1* | Caldwell | O-Evansville | 300 | 124 | x | x | x | | | | | - | | - | |
| Grassy Creek * | Morgan | M-Licking | 150 | 100 | x | x | x | x | | | | - | | - | |
| Fox Creek No. 4* | Fleming | M-Licking | 260 | 75 | x | x | x | x | | | | - | | - | |
| City of Caneyville: | | | | | | | | | | | | | | | |
| Caney Creek No. 2* | Grayson | P-Green | 980 | 750 | x | x | x | x | | | | - | | - | |
| City of Elizabethtown: | | | | | | | | | | | | | | | |
| Valley Creek No. 4* | Hardin | P-Green | 300 | 160 | x | x | x | x | | | | - | | - | |

TENNESSEE RECREATION INVENTORY

| POTENTIAL AREA | LOCATION | | ACREAGE | | | | GENERAL RECREATION ACTIVITIES | | | | | | VISITATION | | | | |
|---------------------------------|------------------|--------------|---------|------------|-------|------------|-------------------------------------|---------|---------|----------|---------|-------|-----------------------|------------|-----------|------------|--|
| | | | TOTAL | | WATER | | PICNICKING | CAMPING | BOATING | SWIMMING | LODGING | OTHER | Most Recent Available | | Projected | | |
| | BASIN | STUDY AREA | BASIN | STUDY AREA | BASIN | STUDY AREA | | | | | | | BASIN | STUDY AREA | BASIN | STUDY AREA | |
| FEDERAL | | | | | | | | | | | | | | | | | |
| Corps of Engineers: | | | | | | | | | | | | | | | | | |
| Cornell Hill Reservoir | Smith | S-Cumberland | NA | 14000 | | | | | | | | - | | 400000 | | | |
| J. Percy Priest Reservoir | Davidson | S-Cumberland | NA | 14200 | | | | | | | | - | | 1700000 | | | |
| Three Island Reservoir | Dickson-Cheatham | S-Cumberland | NA | 9740 | | | | | | | | - | | - | | | |
| Tennessee Valley Authority: | | | | | | | | | | | | | | | | | |
| Between-the-Lakes | Stewart | S-Cumberland | 65182 | - | | | x | x | x | x | | - | | - | | | |
| Great Falls Lake | Warren-White | S-Cumberland | 1677 | - | | | x | x | x | x | x | - | | - | | | |
| U.S. Fish and Wildlife Service: | | | | | | | | | | | | | | | | | |
| Cross Creeks Refuge | Stewart | S-Cumberland | 3552 | 3100 | | | | | x | | x | 12700 | | - | | | |
| STATE | | | | | | | | | | | | | | | | | |
| State Parks: | | | | | | | | | | | | | | | | | |
| Fall Creek Falls | Van Buren | S-Cumberland | 200 | - | | | | | x | | x | - | | - | | | |
| MAJOR LOCAL | | | | | | | | | | | | | | | | | |
| Oneida: | | | | | | | | | | | | | | | | | |
| Pine Creek* | Scott | S-Cumberland | 99 | 31 | | | x | x | x | | x | - | | 48000 | | | |
| Watershed Districts: | | | | | | | | | | | | | | | | | |
| Pine Creek* | Scott | S-Cumberland | 54 | 20 | | | | | x | | x | - | | 4500 | | | |

APPENDIX III

COUNTY COMPOSITION OF OHIO RIVER BASIN SUBAREAS

| <u>County</u> | <u>State</u> | <u>Standard Metropolitan Statistical Area</u> |
|-----------------------------------|---------------|-----------------------------------------------------------|
| <u>Subarea A--ALLEGHENY</u> | | |
| Armstrong | Pennsylvania | |
| Cambria | Pennsylvania | Johnstown |
| Cattaraugus | New York | |
| Chautauqua | New York | |
| Clarion | Pennsylvania | |
| Crawford | Pennsylvania | |
| Elk | Pennsylvania | |
| Forest | Pennsylvania | |
| Indiana | Pennsylvania | |
| Jefferson | Pennsylvania | |
| McKean | Pennsylvania | |
| Somerset | Pennsylvania | Johnstown |
| Venango | Pennsylvania | |
| Warren | Pennsylvania | |
| <u>Subarea B--MONONGAHELA</u> | | |
| Barbour | West Virginia | |
| Fayette | Pennsylvania | |
| Garrett | Maryland | |
| Greene | Pennsylvania | |
| Harrison | West Virginia | |
| Lewis | West Virginia | |
| Marion | West Virginia | |
| Monongalia | West Virginia | |
| Preston | West Virginia | |
| Randolph | West Virginia | |
| Taylor | West Virginia | |
| Tucker | West Virginia | |
| Upshur | West Virginia | |
| <u>Subarea C--PITTSBURGH SMSA</u> | | |
| Allegheny | Pennsylvania | Pittsburgh |
| Beaver | Pennsylvania | Pittsburgh |
| Washington | Pennsylvania | Pittsburgh |
| Westmoreland | Pennsylvania | Pittsburgh |

| <u>County</u> | <u>State</u> | <u>Standard Metropolitan Statistical Area</u> |
|------------------------------|---------------|-----------------------------------------------------------|
| <u>Subarea D--BEAVER</u> | | |
| Butler | Pennsylvania | |
| Lawrence | Pennsylvania | |
| Mahoning | Ohio | Youngstown-Warren |
| Mercer | Pennsylvania | |
| Trumbull | Ohio | Youngstown-Warren |
| <u>Subarea E--UPPER OHIO</u> | | |
| Athens | Ohio | |
| Belmont | Ohio | Wheeling |
| Brooke | West Virginia | Steubenville, Weirton |
| Columbiana | Ohio | |
| Doddridge | West Virginia | |
| Hancock | West Virginia | Steubenville-Weirton |
| Jefferson | Ohio | Steubenville-Weirton |
| Marshall | West Virginia | Wheeling |
| Monroe | Ohio | |
| Ohio | West Virginia | Wheeling |
| Pleasants | West Virginia | |
| Tyler | West Virginia | |
| Washington | Ohio | |
| Wetzel | West Virginia | |
| Wood | West Virginia | |
| <u>Subarea F--MUSKINGUM</u> | | |
| Ashland | Ohio | |
| Carroll | Ohio | |
| Coshocton | Ohio | |
| Guernsey | Ohio | |
| Harrison | Ohio | |
| Holmes | Ohio | |
| Knox | Ohio | |
| Licking | Ohio | |
| Morgan | Ohio | |
| Muskingum | Ohio | |
| Noble | Ohio | |
| Perry | Ohio | |
| Richland | Ohio | |
| Stark | Ohio | Canton |
| Tuscarawas | Ohio | |
| Wayne | Ohio | |

Standard
Metropolitan
Statistical
Area

County

State

Subarea G--KANAWHA-LITTLE KANAWHA

| | | |
|------------|----------------|------------|
| Alleghany | North Carolina | |
| Ashe | North Carolina | |
| Bland | Virginia | |
| Boone | West Virginia | |
| Braxton | West Virginia | |
| Calhoun | West Virginia | |
| Carroll | Virginia | |
| Clay | West Virginia | |
| Fayette | West Virginia | |
| Floyd | Virginia | |
| Giles | Virginia | |
| Gilmer | West Virginia | |
| Grayson | Virginia | |
| Greenbrier | West Virginia | |
| Kanawha | West Virginia | Charleston |
| Mercer | West Virginia | |
| Monroe | West Virginia | |
| Montgomery | Virginia | |
| Nicholas | West Virginia | |
| Pacahontas | West Virginia | |
| Pulaski | Virginia | |
| Putnam | West Virginia | |
| Raleigh | West Virginia | |
| Ritchie | West Virginia | |
| Roane | West Virginia | |
| Summers | West Virginia | |
| Watauga | North Carolina | |
| Webster | West Virginia | |
| Wirt | West Virginia | |
| Wythe | Virginia | |

Subarea H--OHIO HUNTINGTON

| | | |
|----------|---------------|--------------------|
| Boyd | Kentucky | Huntington-Ashland |
| Cabell | West Virginia | Huntington-Ashland |
| Gallia | Ohio | |
| Greenup | Kentucky | |
| Jackson | Ohio | |
| Jackson | West Virginia | |
| Lawrence | Ohio | Huntington-Ashland |

| <u>County</u> | <u>State</u> | <u>Standard Metropolitan Statistical Area</u> |
|-----------------------------------------|---------------|-----------------------------------------------------------|
| <u>Subarea H--OHIO-HUNTINGTON (con)</u> | | |
| Lewis | Kentucky | |
| Mason | West Virginia | |
| Meigs | Ohio | |
| Pike | Ohio | |
| Scioto | Ohio | |
| Vinton | Ohio | |
| Wayne | West Virginia | Huntington-Ashland |

Subarea I--SCIOTO

| | | |
|-----------|------|----------|
| Delaware | Ohio | |
| Fairfield | Ohio | |
| Fayette | Ohio | |
| Franklin | Ohio | Columbus |
| Hardin | Ohio | |
| Highland | Ohio | |
| Hocking | Ohio | |
| Madison | Ohio | |
| Marion | Ohio | |
| Morrow | Ohio | |
| Pickaway | Ohio | |
| Ross | Ohio | |
| Union | Ohio | |

Subarea J--GUYANDOT-BIG SANDY-LITTLE SANDY

| | | |
|-----------|---------------|--|
| Buchanan | Virginia | |
| Carter | Kentucky | |
| Dickenson | Virginia | |
| Elliott | Kentucky | |
| Floyd | Kentucky | |
| Johnson | Kentucky | |
| Lawrence | Kentucky | |
| Lincoln | West Virginia | |
| Logan | West Virginia | |
| McDowell | West Virginia | |
| Martin | Kentucky | |
| Mingo | West Virginia | |
| Pike | Kentucky | |
| Wyoming | West Virginia | |

| <u>County</u> | <u>State</u> | <u>Standard Metropolitan Statistical Area</u> |
|-----------------------------------|--------------|-----------------------------------------------------------|
| <u>Subarea K--OHIO-CINCINNATI</u> | | |
| Adams | Ohio | |
| Boone | Kentucky | |
| Bracken | Kentucky | |
| Brown | Ohio | |
| Campbell | Kentucky | Cincinnati |
| Clermont | Ohio | |
| Dearborn | Indiana | |
| Gallatin | Kentucky | |
| Hamilton | Ohio | Cincinnati |
| Kenton | Kentucky | Cincinnati |
| Mason | Kentucky | |
| Ohio | Indiana | |
| Ripley | Indiana | |
| Switzerland | Indiana | |

Subarea L--LITTLE MIAMI-MIAMI

| | | |
|------------|---------|---------------------|
| Butler | Ohio | Hamilton-Middletown |
| Champaign | Ohio | |
| Clark | Ohio | Springfield |
| Clinton | Ohio | |
| Darke | Ohio | |
| Fayette | Indiana | |
| Franklin | Indiana | |
| Greene | Ohio | Dayton |
| Logan | Ohio | |
| Miami | Ohio | Dayton |
| Montgomery | Ohio | Dayton |
| Preble | Ohio | |
| Shelby | Ohio | |
| Union | Indiana | |
| Warren | Ohio | |
| Wayne | Indiana | |

Subarea M--LICKING-KENTUCKY-SALT

| | |
|-----------|----------|
| Anderson | Kentucky |
| Bath | Kentucky |
| Bourbon | Kentucky |
| Boyle | Kentucky |
| Breathill | Kentucky |
| Clark | Kentucky |
| Clay | Kentucky |
| Estill | Kentucky |

| <u>County</u> | <u>State</u> | <u>Standard Metropolitan Statistical Area</u> |
|-----------------------------------------------|--------------|-----------------------------------------------------------|
| <u>Subarea M--LICKING-KENTUCKY-SALT (con)</u> | | |
| Fayette | Kentucky | Lexington |
| Fleming | Kentucky | |
| Franklin | Kentucky | |
| Garrard | Kentucky | |
| Grant | Kentucky | |
| Harrison | Kentucky | |
| Henry | Kentucky | |
| Jessamine | Kentucky | |
| Knott | Kentucky | |
| Lee | Kentucky | |
| Leslie | Kentucky | |
| Letcher | Kentucky | |
| Lincoln | Kentucky | |
| Madison | Kentucky | |
| Magoffin | Kentucky | |
| Marion | Kentucky | |
| Menifee | Kentucky | |
| Mercer | Kentucky | |
| Montgomery | Kentucky | |
| Morgan | Kentucky | |
| Nelson | Kentucky | |
| Nicholas | Kentucky | |
| Owen | Kentucky | |
| Owsley | Kentucky | |
| Pendleton | Kentucky | |
| Perry | Kentucky | |
| Powell | Kentucky | |
| Robertson | Kentucky | |
| Rowan | Kentucky | |
| Scott | Kentucky | |
| Shelby | Kentucky | |
| Spencer | Kentucky | |
| Washington | Kentucky | |
| Wolfe | Kentucky | |
| Woodford | Kentucky | |

Subarea N--OHIO-LOUISVILLE

| | | |
|--------------|----------|------------|
| Breckinridge | Kentucky | |
| Bullitt | Kentucky | |
| Carroll | Kentucky | |
| Clark | Indiana | Louisville |
| Crawford | Indiana | |
| Floyd | Indiana | Louisville |

| <u>County</u> | <u>State</u> | <u>Standard Metropolitan Statistical Area</u> |
|-----------------------------------------|--------------|-----------------------------------------------------------|
| <u>Subarea N--OHIO-LOUISVILLE (con)</u> | | |
| Harrison | Indiana | |
| Jefferson | Indiana | |
| Jefferson | Kentucky | Louisville |
| Meade | Kentucky | |
| Oldham | Kentucky | |
| Trimble | Kentucky | |

| | | |
|-----------------------------------------|----------|------------|
| <u>Subarea O--LOWER OHIO-EVANSVILLE</u> | | |
| Ballard | Kentucky | |
| Caldwell | Kentucky | |
| Crittenden | Kentucky | |
| Daviess | Kentucky | |
| Gallatin | Illinois | |
| Hancock | Kentucky | |
| Hardin | Illinois | |
| Henderson | Kentucky | Evansville |
| Johnson | Illinois | |
| Livingston | Kentucky | |
| McCracken | Kentucky | |
| McLean | Kentucky | |
| Massac | Illinois | |
| Perry | Indiana | |
| Pope | Illinois | |
| Posey | Indiana | |
| Pulaski | Illinois | |
| Saline | Illinois | |
| Spencer | Indiana | |
| Union | Kentucky | |
| Vanderburgh | Indiana | Evansville |
| Warrick | Indiana | |
| Webster | Kentucky | |

| | | |
|-------------------------|----------|--|
| <u>Subarea P--GREEN</u> | | |
| Adair | Kentucky | |
| Allen | Kentucky | |
| Barren | Kentucky | |
| Butler | Kentucky | |
| Casey | Kentucky | |
| Edmonson | Kentucky | |
| Grayson | Kentucky | |
| Green | Kentucky | |
| Hardin | Kentucky | |

Standard
Metropolitan
Statistical
Area

County

State

Subarea P--GREEN (con)

| | |
|------------|----------|
| Hart | Kentucky |
| Hopkins | Kentucky |
| Larue | Kentucky |
| Logan | Kentucky |
| Metcalfe | Kentucky |
| Muhlenberg | Kentucky |
| Ohio | Kentucky |
| Simpson | Kentucky |
| Taylor | Kentucky |
| Warren | Kentucky |

Subarea Q--WHITE

| | | |
|-------------|---------|--------------|
| Bartholomew | Indiana | |
| Boone | Indiana | |
| Brown | Indiana | |
| Clay | Indiana | |
| Daviess | Indiana | |
| Decatur | Indiana | |
| Delaware | Indiana | Muncie |
| Dubois | Indiana | |
| Gibson | Indiana | |
| Greene | Indiana | |
| Hamilton | Indiana | |
| Hancock | Indiana | |
| Hendricks | Indiana | |
| Henry | Indiana | |
| Jackson | Indiana | |
| Jennings | Indiana | |
| Johnson | Indiana | |
| Knox | Indiana | |
| Lawrence | Indiana | |
| Madison | Indiana | |
| Marion | Indiana | Indianapolis |
| Martin | Indiana | |
| Monroe | Indiana | |
| Morgan | Indiana | |
| Orange | Indiana | |
| Owen | Indiana | |
| Pike | Indiana | |
| Putnam | Indiana | |
| Randolph | Indiana | |
| Rush | Indiana | |
| Scott | Indiana | |

| <u>County</u> | <u>State</u> | <u>Standard Metropolitan Statistical Area</u> |
|-------------------------------|--------------|-----------------------------------------------------------|
| <u>Subarea Q--WHITE (con)</u> | | |
| Shelby | Indiana | |
| Washington | Indiana | |
| <u>Subarea R--WABASH</u> | | |
| Benton | Indiana | |
| Blackford | Indiana | |
| Carroll | Indiana | |
| Cass | Indiana | |
| Champaign | Illinois | Champaign-Urbana |
| Clark | Illinois | |
| Clay | Illinois | |
| Clinton | Indiana | |
| Coles | Illinois | |
| Crawford | Illinois | |
| Cumberland | Illinois | |
| Douglas | Illinois | |
| Edgar | Illinois | |
| Edwards | Illinois | |
| Effingham | Illinois | |
| Fountain | Indiana | |
| Fulton | Indiana | |
| Grant | Indiana | |
| Hamilton | Illinois | |
| Howard | Indiana | |
| Huntington | Indiana | |
| Jasper | Illinois | |
| Jay | Indiana | |
| Kosciusko | Indiana | |
| Lawrence | Illinois | |
| Miami | Indiana | |
| Montgomery | Indiana | |
| Parke | Indiana | |
| Pulaski | Indiana | |
| Richland | Illinois | |
| Sullivan | Indiana | |
| Tippecanoe | Indiana | |
| Tipton | Indiana | |
| Vermilion | Illinois | |
| Vermillion | Indiana | |
| Vigo | Indiana | Terre Haute |
| Wabash | Illinois | |
| Wabash | Indiana | |
| Warren | Indiana | |

Standard
Metropolitan
Statistical
Area

County

State

Subarea R--WABASH (con)

| | |
|---------|----------|
| Wayne | Illinois |
| Wells | Indiana |
| White | Illinois |
| White | Indiana |
| Whitley | Indiana |

Subarea S--CUMBERLAND

| | |
|------------|-----------|
| Bell | Kentucky |
| Cannon | Tennessee |
| Cheatham | Tennessee |
| Christian | Kentucky |
| Clay | Tennessee |
| Clinton | Kentucky |
| Cumberland | Kentucky |
| Davidson | Tennessee |
| DeKalb | Tennessee |
| Dickson | Tennessee |
| Fentress | Tennessee |
| Harlan | Kentucky |
| Houston | Tennessee |
| Jackson | Kentucky |
| Jackson | Tennessee |
| Knox | Kentucky |
| Laurel | Kentucky |
| Lyon | Kentucky |
| McCreary | Kentucky |
| Macon | Tennessee |
| Monroe | Kentucky |
| Montgomery | Tennessee |
| Overton | Tennessee |
| Pickett | Tennessee |
| Pulaski | Kentucky |
| Putnam | Tennessee |
| Robertson | Tennessee |
| Rockcastle | Kentucky |
| Russell | Kentucky |
| Rutherford | Tennessee |
| Scott | Tennessee |
| Smith | Tennessee |
| Stewart | Tennessee |
| Sumner | Tennessee |
| Todd | Kentucky |
| Trigg | Kentucky |

Nashville

Standard
Metropolitan
Statistical
Area

County

State

Subarea S--CUMBERLAND (con)

| | |
|------------|-----------|
| Trousdale | Tennessee |
| Van Buren | Tennessee |
| Warren | Tennessee |
| Wayne | Kentucky |
| White | Tennessee |
| Whitley | Kentucky |
| Williamson | Tennessee |
| Wilson | Tennessee |

APPENDIX IV

POLICIES AFFECTING WATER-ORIENTED OUTDOOR RECREATION DEVELOPMENT

A. Introduction. This appendix deals primarily with outdoor recreation policy as reflected in recent legislation, particularly in areas of planning, coordination, and financial assistance.

B. Planning. The Outdoor Recreation Resources Review Commission specifically recommended that each state, through a central agency, develop a long-range plan for outdoor recreation aimed at providing adequate opportunities for the public, and acquiring additional areas where necessary. The Land and Water Conservation Fund Act of 1965 provided the necessary stimulus to move the Commission's recommendation toward accomplishment. The Act required the preparation of a statewide comprehensive outdoor recreation plan by each state prior to the distribution of matching grants for land acquisition and development of recreation areas and facilities. In addition, matching grants for planning were provided for under this Act. Some state plans are now qualified for matching grants, and by the end of 1965 most states should have completed at least the initial draft of their statewide outdoor recreation comprehensive plans.

Public Law 88-29, enacted May 28, 1963, authorized Federal action in outdoor recreation planning. Section 2 of this Act authorized the Secretary of the Interior to: (a) prepare and maintain a continuing inventory and evaluation of outdoor recreation needs and resources of the United States, (b) prepare a system for classification of outdoor recreation resources, and (c) formulate and maintain a comprehensive nationwide outdoor recreation plan. The Bureau of Outdoor Recreation is carrying out these outdoor recreation planning functions by developing a Nationwide Plan.

The recently enacted Federal Water Projects Recreation Act (Public Law 89-72, July 9, 1965) adds new emphasis to outdoor recreation planning in Federal water resource projects and authorizes full development for recreation and fish and wildlife purposes. Specifically, Section 6 of the Act expressly provides that any report on a proposed project shall include the views of the Secretary of the Interior in accordance with the Organic Act of the Bureau of Outdoor Recreation. The Bureau, under provisions of this Act, will undertake preauthorization planning for outdoor recreation on proposed Federal water resource projects, and, additionally, as also directed by the above law, will determine to what extent any proposed development is in accord with statewide outdoor recreation plans as prepared pursuant to the Land and Water Conservation Fund Act.

Outdoor recreation planning is also a function of local governmental agencies, particularly of importance in and around metropolitan centers and urban areas where the securing of open space and the developing of new recreation areas is essential toward efforts to provide for growing outdoor recreation needs. Regional agencies and county and city governments are making an outdoor recreation planning effort in response to opportunity for Federal assistance made available through the Land and Water Conservation Fund Act.

C. Coordination. The Outdoor Recreation Resource Review Commission, anticipating the need for a coordinated effort among the various levels of government to meet the growing demands for outdoor recreation, recommended the creation of a Bureau of Outdoor Recreation in the Department of the Interior. The Commission specifically viewed the Bureau as the nonland managing agency to coordinate the recreation-related activities of more than 20 Federal agencies, and to encourage interstate and regional cooperation.

Public Law 88-29, on May 28, 1963, authorized the Secretary of the Interior to cooperate with Federal agencies and promote coordination of Federal outdoor recreation programs. The Bureau of Outdoor Recreation has been delegated to carry out this function of the law.

A second and equally important contribution of the Commission to outdoor recreation coordination was its recommendation to establish a Recreation Advisory Council consisting of the Secretaries of Interior, Agriculture, and Defense. The council would promote interdepartmental coordination as well as provide broad policy guidance on matters affecting outdoor recreation programs. Both the Bureau of Outdoor Recreation and the Recreation Advisory Council became a reality as a result of the Commission's report to the President and the Congress.

D. Financial Assistance. A major recommendation of the Outdoor Recreation Resources Review Commission was the establishment of a Federal grants-in-aid program to stimulate and assist states in meeting the demand for outdoor recreation. Public Law 88-578, passed September 3, 1964, created the Land and Water Conservation Fund for this purpose. The Fund derives its revenue from (1) admission and user fees at Federal recreation areas which meet certain qualifications, (2) net proceeds from sale of surplus Federal real property, and (3) the existing tax on motorboat fuels. As indicated in Part B of this appendix, a comprehensive statewide outdoor recreation plan is required prior to the Secretary's consideration of financial assistance to the states for acquisition or development projects. Payments to any state shall not exceed 50 percent of the cost of planning, acquisition, or development. Moneys appropriated from the Fund are also available for Federal purposes, in the acquisition of land, waters, or interests in land or waters for (1) National park system recreation areas, (2) National forest system, (3) threatened species, and (4) recreation at refuges.

Title IX of the recently enacted Housing and Urban Development Act of 1965 also establishes a key source of financial assistance in outdoor recreation. The Act provides grants up to 50 percent to acquire and develop open space for park recreation, conservation, scenic or historic purposes. Public Law 566 and the Food and Agriculture Act of 1965 also provide grants for acquisition and development of recreation areas.

The Land and Water Conservation Fund, along with the Housing and Urban Development Act, Highway Beautification Act, Appalachia program, Scenic Roads and Parkways, and other related programs should provide the financial assistance and stimulus necessary for the states to embark on the task of satisfying the needs for water-oriented outdoor recreation identified in this study.

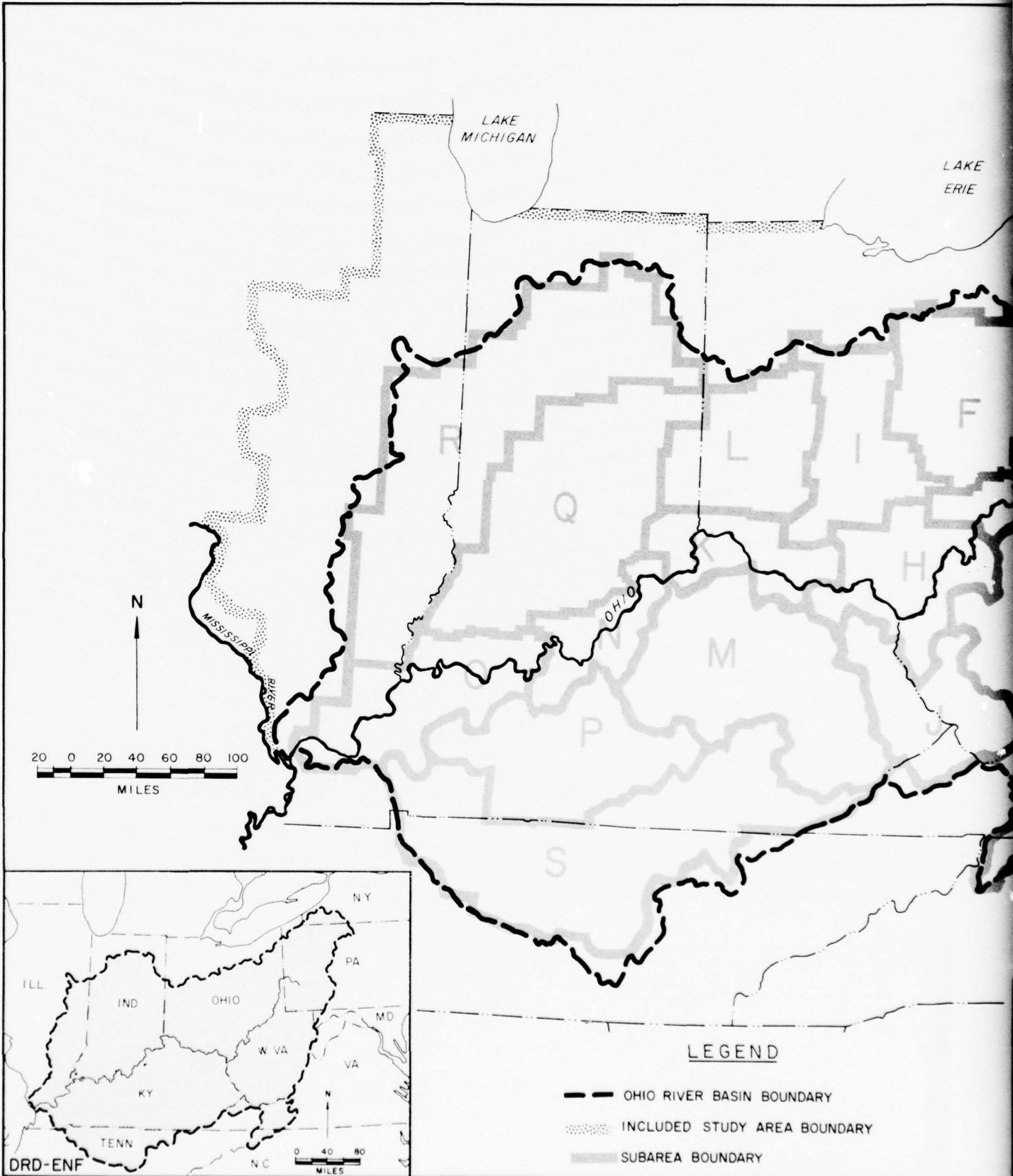
E. Legislation. A listing of selected Federal Statutes reflecting outdoor recreation policy is provided here as an indication of the growing significance attached to leisure pursuits in the American way of life by the Congress of the United States.

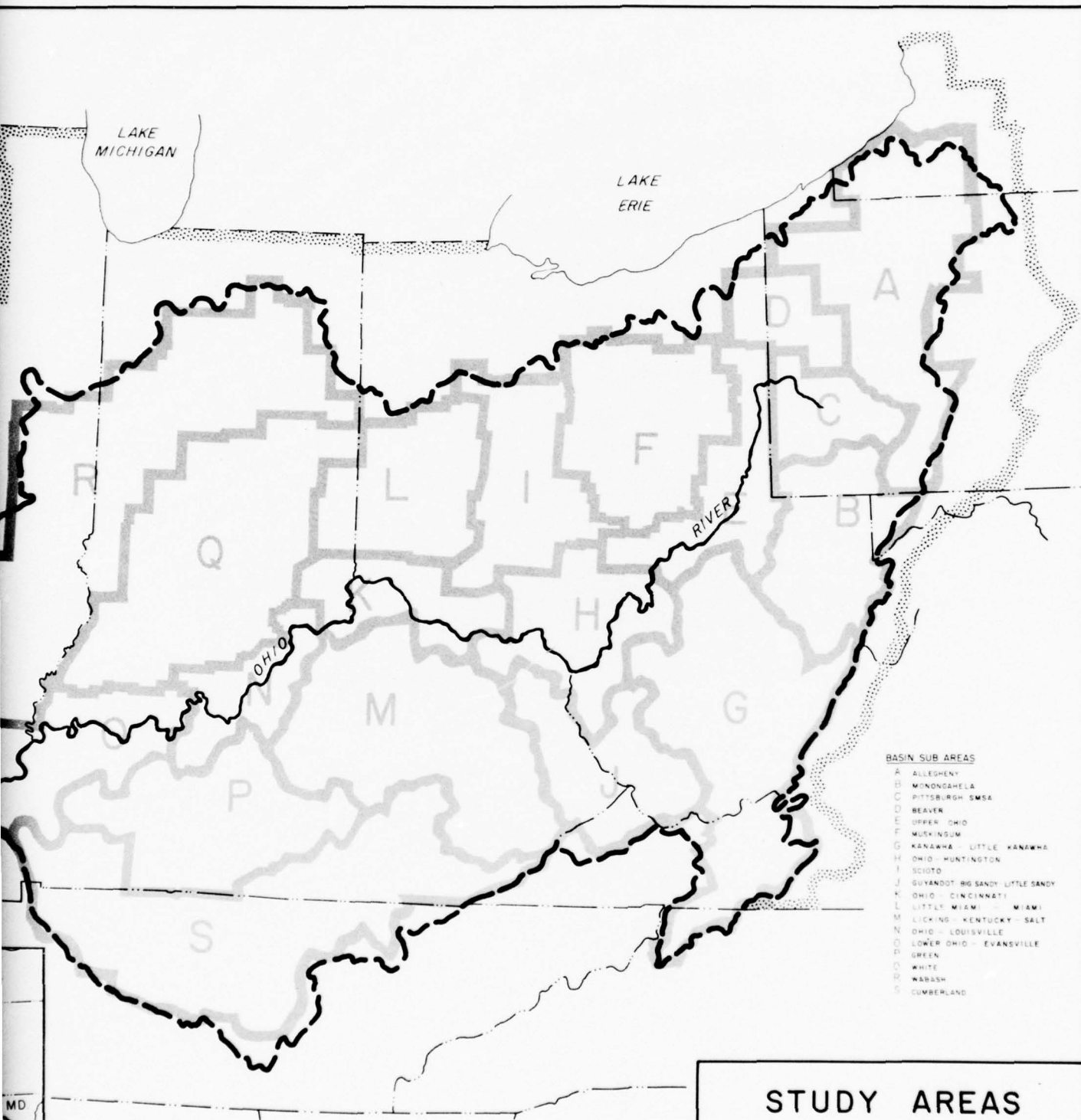
OUTDOOR RECREATION POLICY
AS REFLECTED IN SELECTED FEDERAL STATUTES

1. National Park Service Act of 1916.
2. Historic Sites Act of 1935.
3. National Park Administration Act.
4. Federal Aid in Wildlife Restoration Act (Pittman-Robertson).
5. Surplus Property Act of 1944.
6. Flood Control Act of 1944.
7. Public Health Service Act of 1944.
8. Housing Act of 1949, Title I, Slum Clearance and Urban Renewal.
9. Federal Aid in Fish Restoration and Management Projects Act (Dingell-Johnson).
10. Recreation and Public Purposes Act.
11. Watershed Protection and Flood Prevention Act of 1954.
12. Federal Water Pollution Control Act.
13. Federal Aid Highway Act of 1958.
14. Fish and Wildlife Coordination Act of 1958.
15. Outdoor Recreation Resources Review Act of 1958.
16. National Forests, Multiple Use - Congressional Declaration of policy, 1960.
17. Area Redevelopment Act of 1961.
18. Housing Act of 1961, Title VII.
19. Flood Control Act of 1962.
20. Food and Agriculture Act of 1962.
21. Refuges-Hatcheries Recreation Act.
22. Bureau of Outdoor Recreation Organic Act of 1963.
23. Highway Beautification Act of 1965.
24. Land and Water Conservation Fund Act of 1965.
25. Federal Water Project Recreation Act of 1965.
26. Housing and Urban Development Act of 1965, Title IX.
27. Water Resources Planning Act of 1965.
28. Food and Agriculture Act of 1965.

LIST OF PLATES

| <u>Title</u> | <u>Plate Number</u> |
|----------------------------------------------------------|---------------------|
| Study Areas | 1 |
| Rivers | 1A |
| Interstate Route System | 2 |
| Interstate Route System by States: | |
| Illinois | 3 |
| Indiana | 4 |
| Ohio | 5 |
| Pennsylvania and New York | 6 |
| West Virginia, Maryland, Virginia, and North Carolina | 7 |
| Kentucky and Tennessee | 8 |
| Existing Outdoor Recreation Areas by States: | |
| Illinois | 9 |
| Indiana | 10 |
| Ohio | 11 |
| Pennsylvania and New York | 12 |
| West Virginia, Maryland, Virginia, and North Carolina | 13 |
| Kentucky and Tennessee | 14 |
| Potential Outdoor Recreation Areas by States: | |
| Illinois | 15 |
| Indiana | 16 |
| Ohio | 17 |
| Pennsylvania and New York | 18 |
| West Virginia, Maryland, Virginia, and North Carolina | 19 |
| Kentucky and Tennessee | 20 |





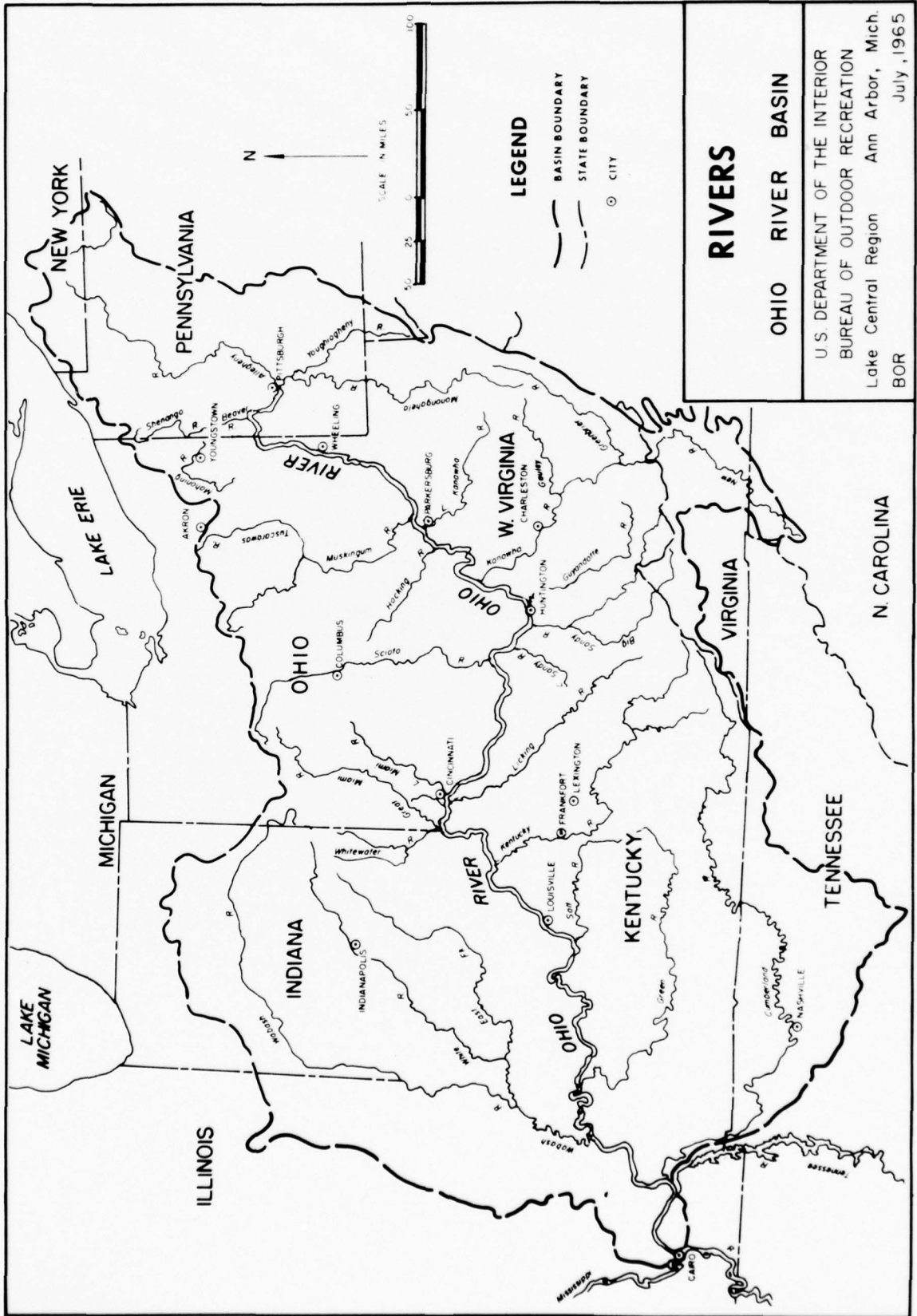
- BASIN SUB AREAS**
- A ALLEGHENY
 - B MONONGAHELA
 - C PITTSBURGH SMSA
 - D BEAVER
 - E UPPER OHIO
 - F MUSKINGUM
 - G KANAWHA - LITTLE KANAWHA
 - H OHIO - HUNTINGTON
 - I SCIOTO
 - J GUYANDOT BIG SANDY LITTLE SANDY
 - K OHIO - CINCINNATI
 - L LITTLE MIAMI - MIAMI
 - M LICKING - KENTUCKY - SALT
 - N OHIO - LOUISVILLE
 - O LOWER OHIO - EVANSVILLE
 - P GREEN
 - Q WHITE
 - R WABASH
 - S CUMBERLAND

LEGEND

- OHIO RIVER BASIN BOUNDARY
- INCLUDED STUDY AREA BOUNDARY
- _____ SUBAREA BOUNDARY

STUDY AREAS
OHIO RIVER BASIN

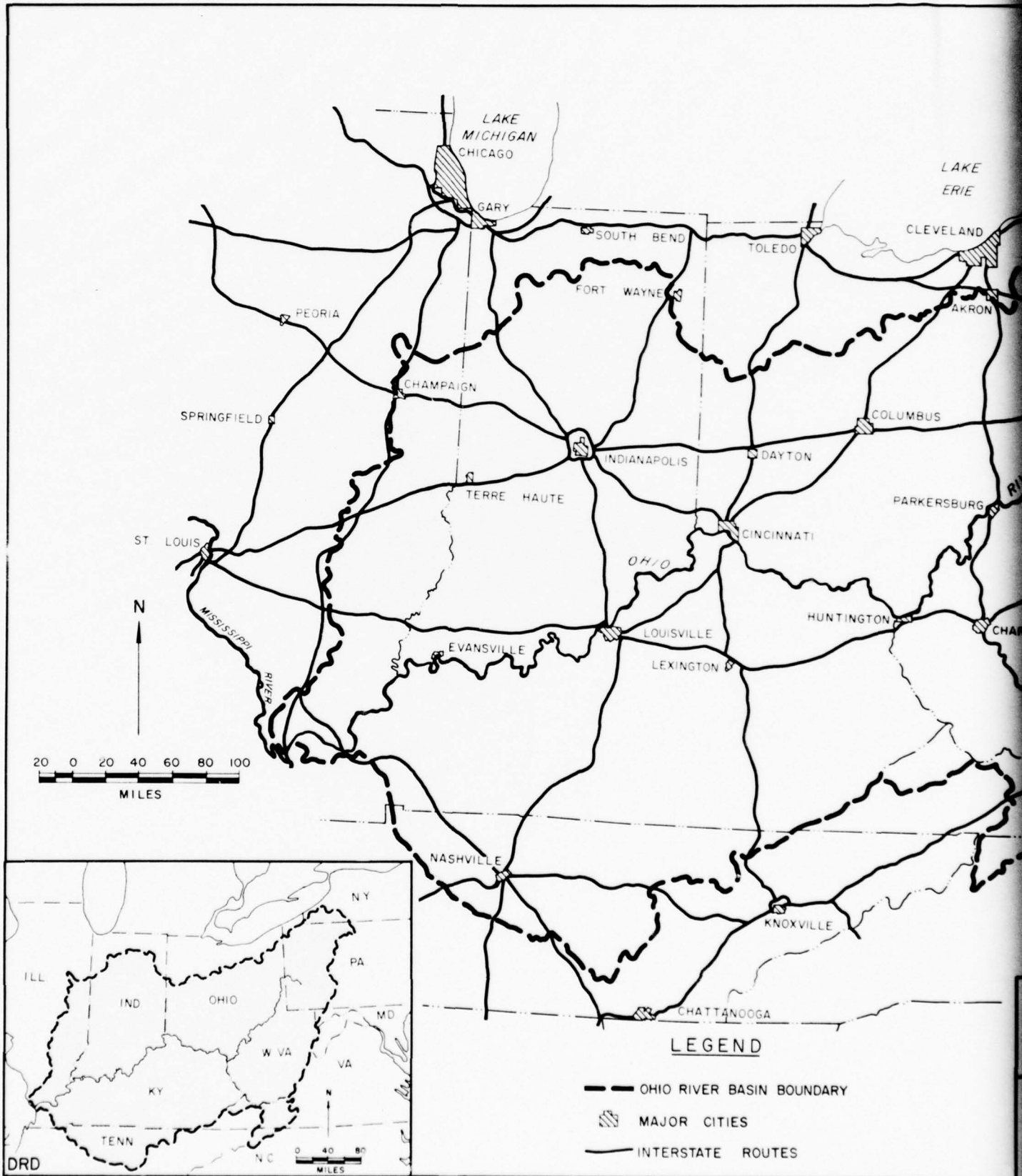
U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF OUTDOOR RECREATION
 Lake Central Region Ann Arbor, Mich.
 BOR July, 1965

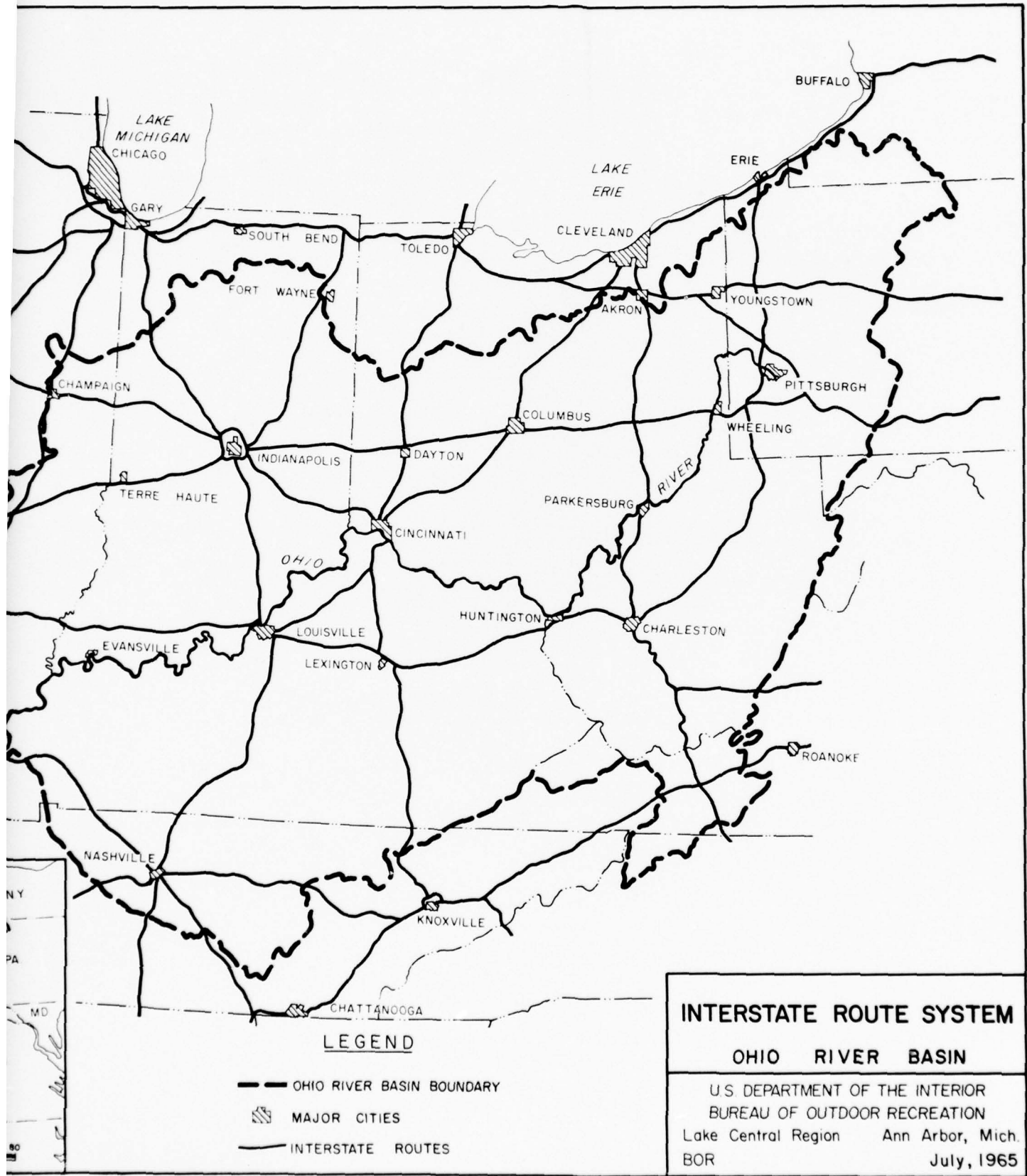


RIVERS

OHIO RIVER BASIN

U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF OUTDOOR RECREATION
 Lake Central Region Ann Arbor, Mich.
 BOR July, 1965



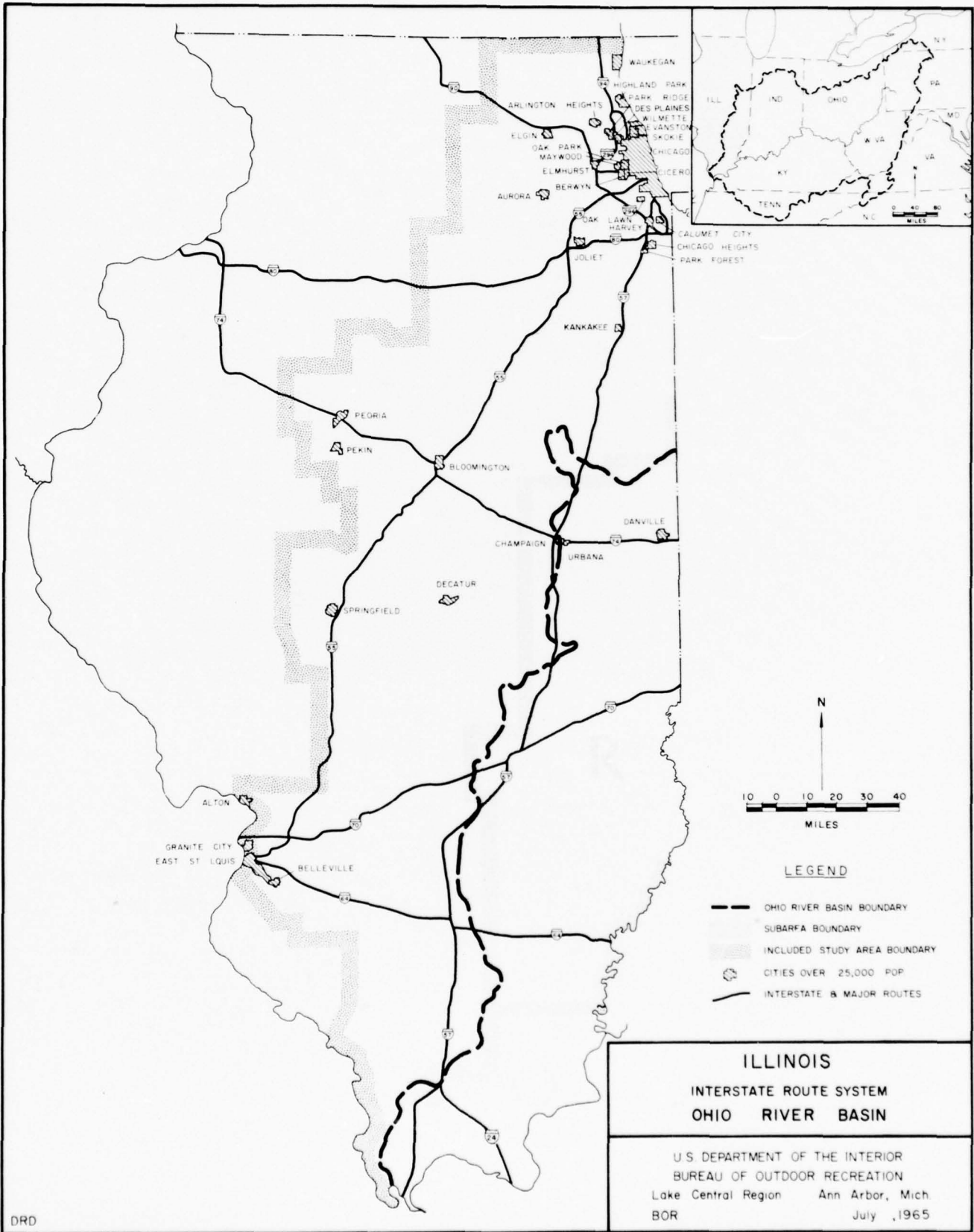


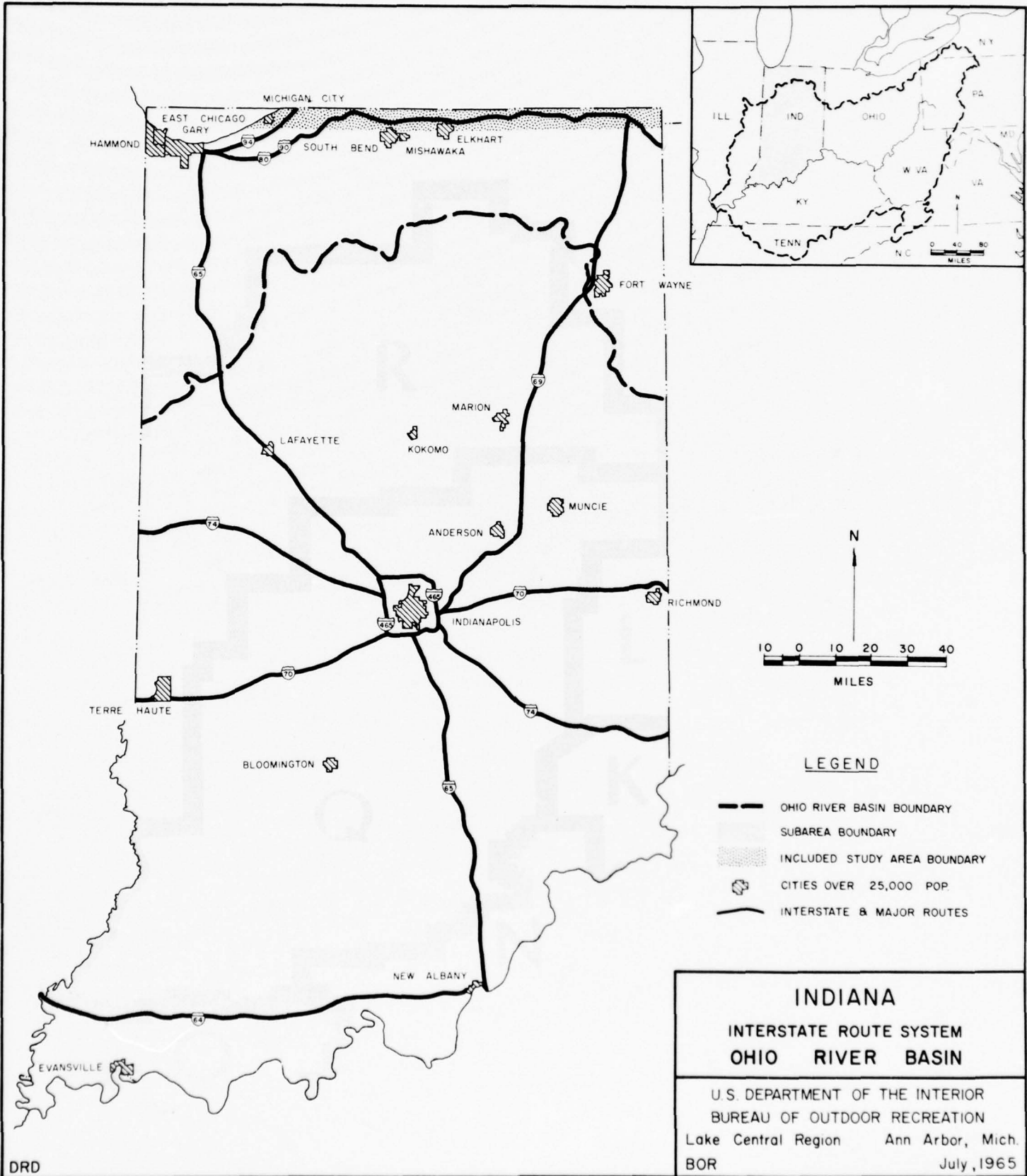
LEGEND

- OHIO RIVER BASIN BOUNDARY
- ▨ MAJOR CITIES
- INTERSTATE ROUTES

INTERSTATE ROUTE SYSTEM
OHIO RIVER BASIN
 U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF OUTDOOR RECREATION
 Lake Central Region Ann Arbor, Mich.
 BOR July, 1965

2

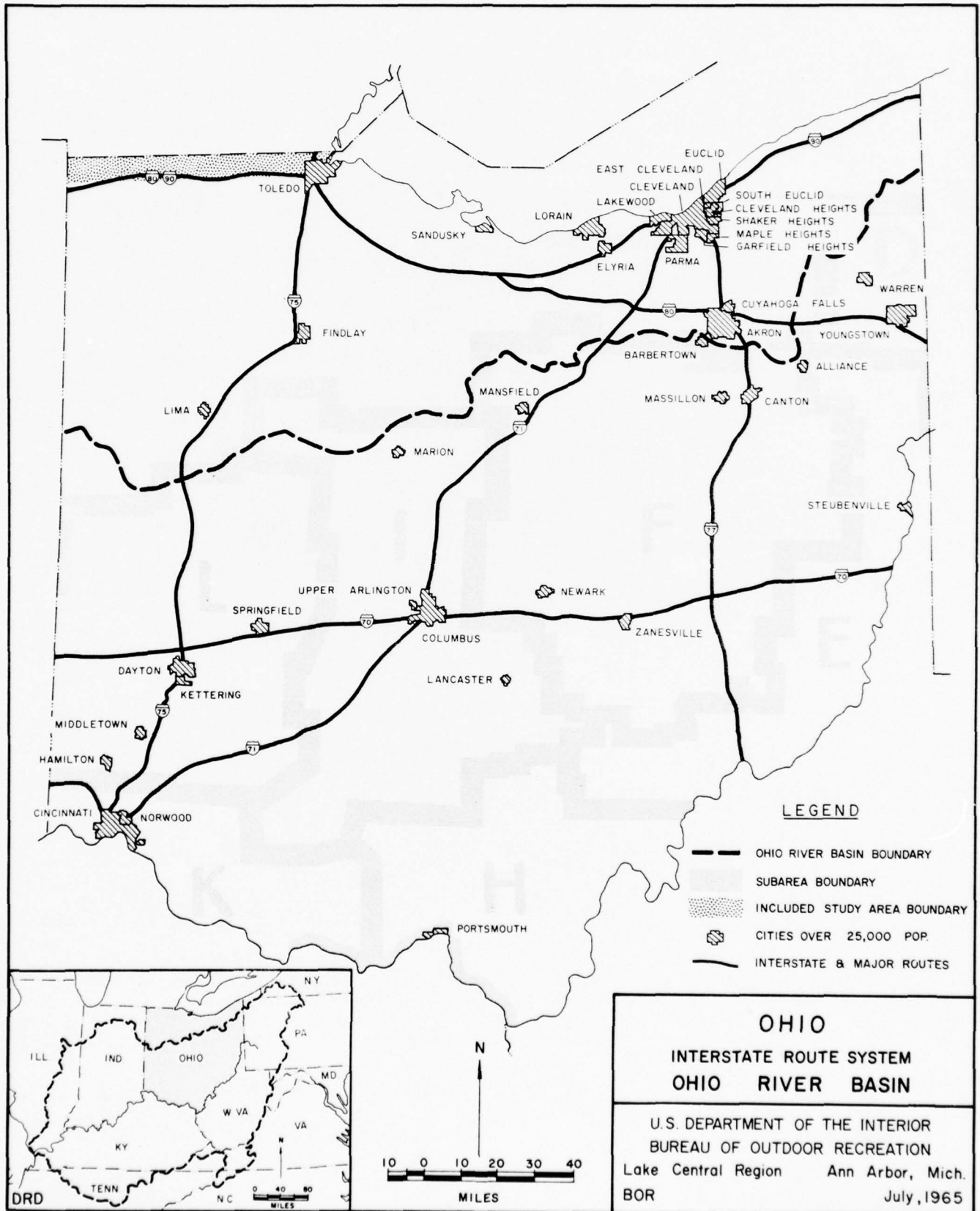


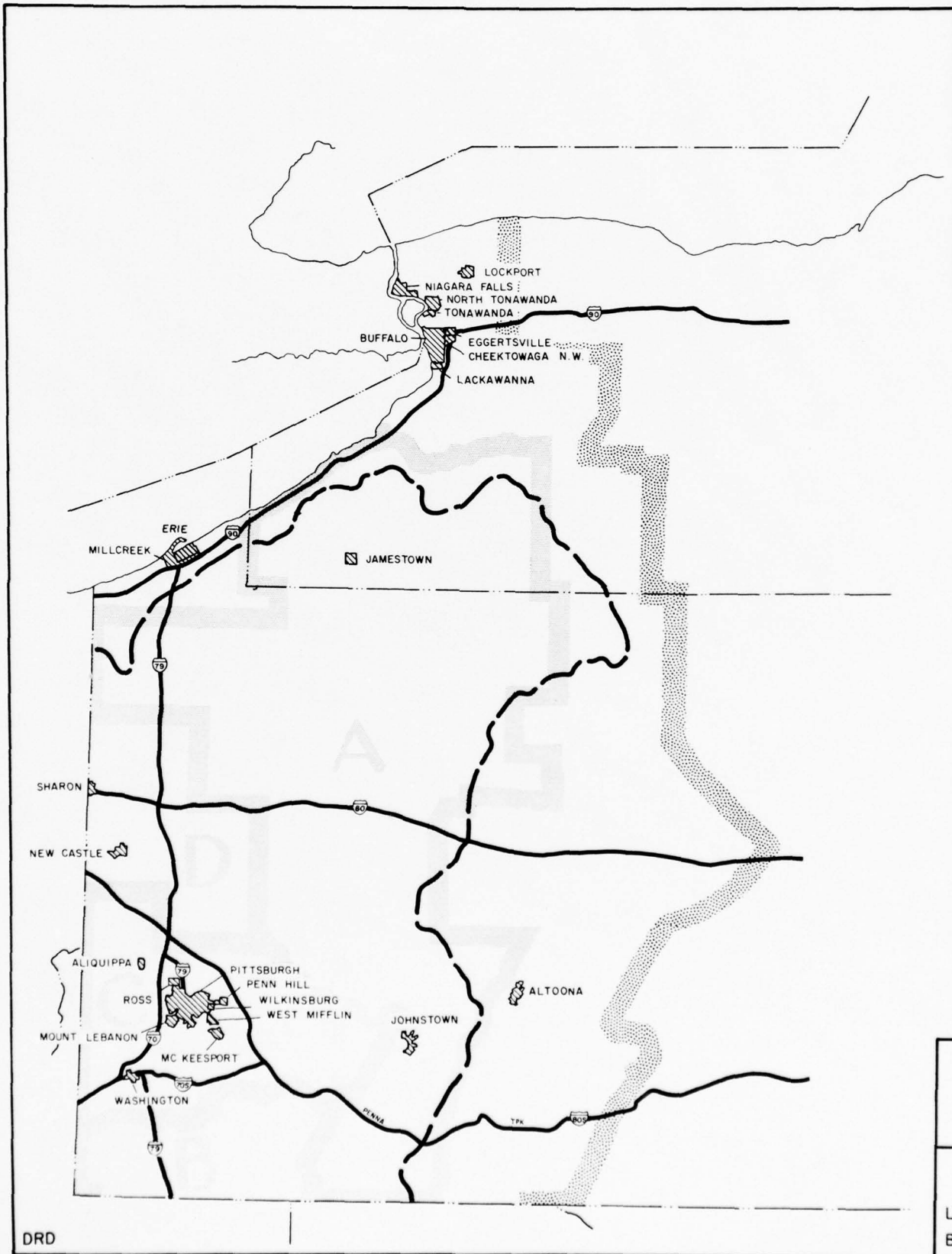


INDIANA
INTERSTATE ROUTE SYSTEM
OHIO RIVER BASIN

U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF OUTDOOR RECREATION
 Lake Central Region Ann Arbor, Mich.
 BOR July, 1965

DRD

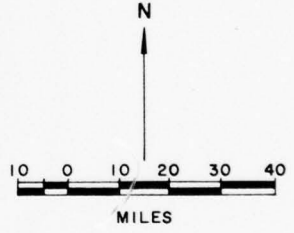
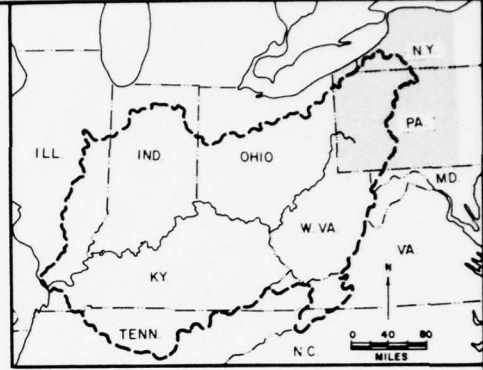
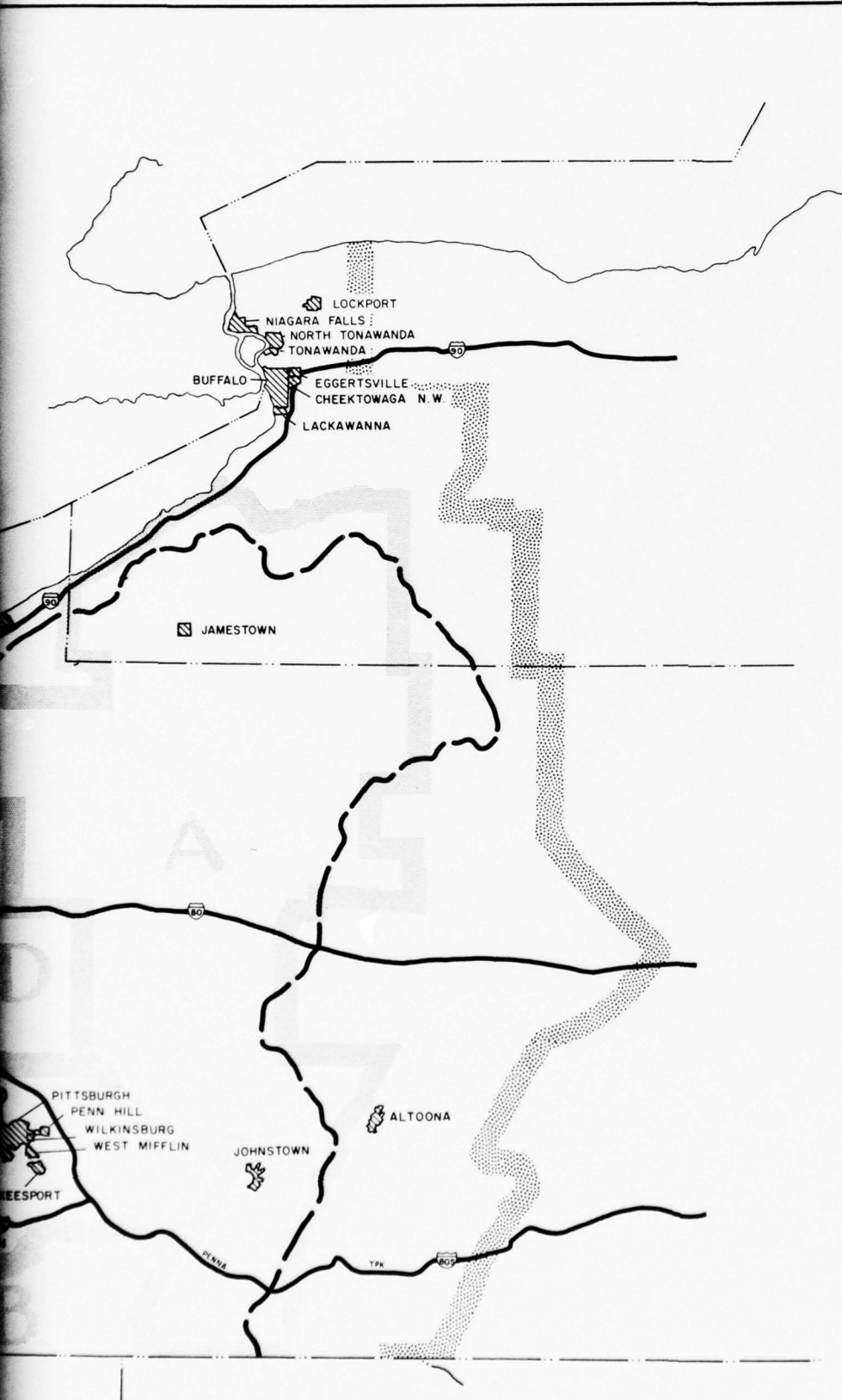




- OHIO
- SUBURBS
- INCLUSIONS
- ▨ CITIES
- INTERSTATE

PENNSYLVANIA
 INTERSTATE
 OHIO
 U.S. DEPARTMENT OF
 BUREAU OF
 Lake Central Region
 BOR

DRD



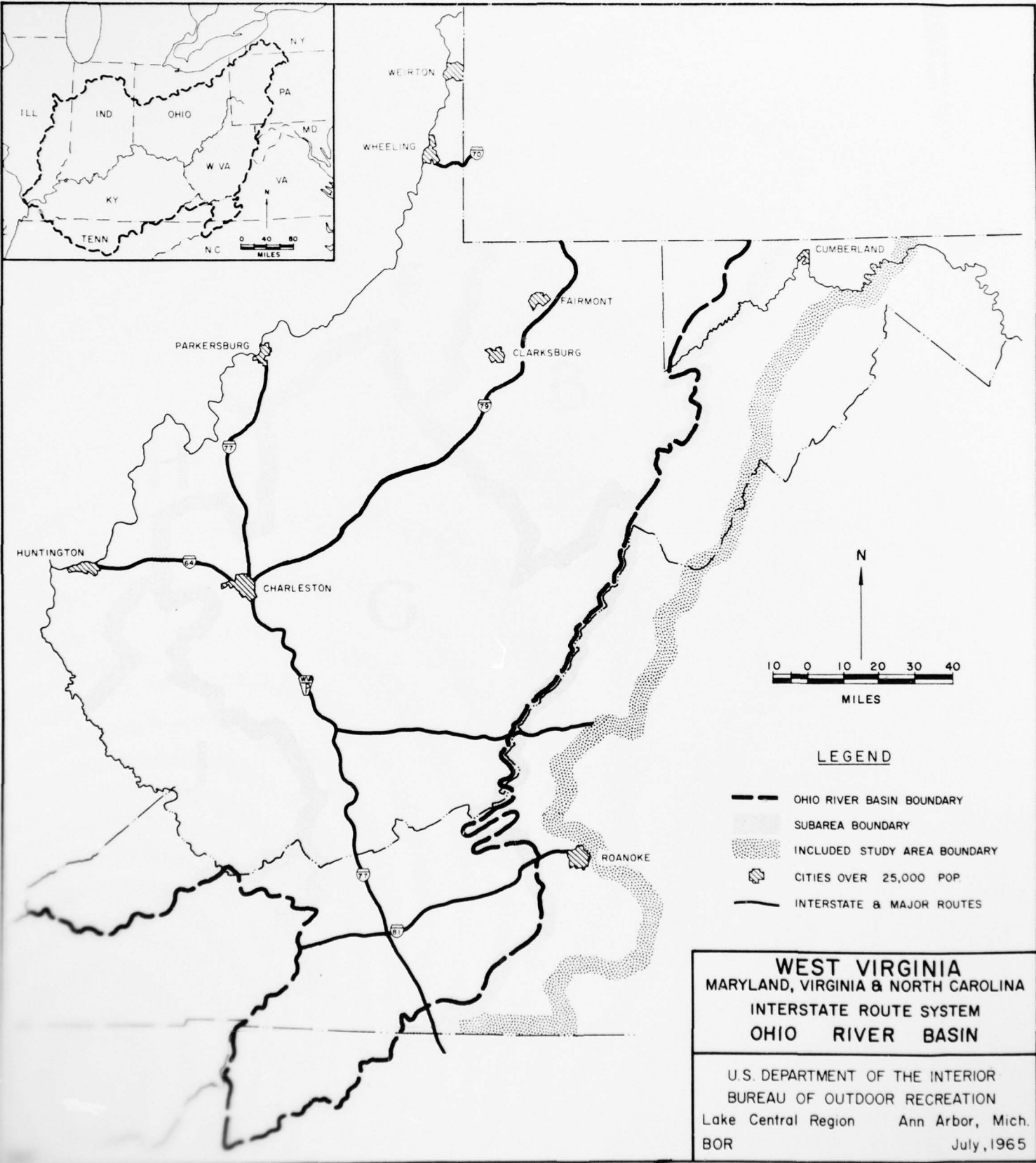
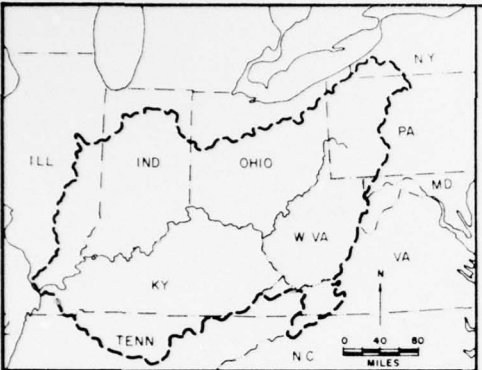
LEGEND

- OHIO RIVER BASIN BOUNDARY
- SUBAREA BOUNDARY
- INCLUDED STUDY AREA BOUNDARY
- CITIES OVER 25,000 POP
- INTERSTATE & MAJOR ROUTES

PENNSYLVANIA & NEW YORK
INTERSTATE ROUTE SYSTEM
OHIO RIVER BASIN

U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF OUTDOOR RECREATION
 Lake Central Region Ann Arbor, Mich.
 BOR July, 1965

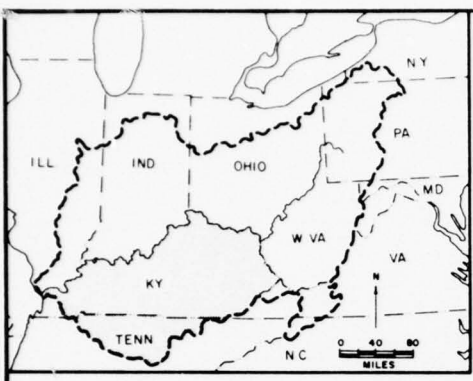
2



- LEGEND**
- OHIO RIVER BASIN BOUNDARY
 - SUBAREA BOUNDARY
 - ▨ INCLUDED STUDY AREA BOUNDARY
 - ◻ CITIES OVER 25,000 POP
 - INTERSTATE & MAJOR ROUTES

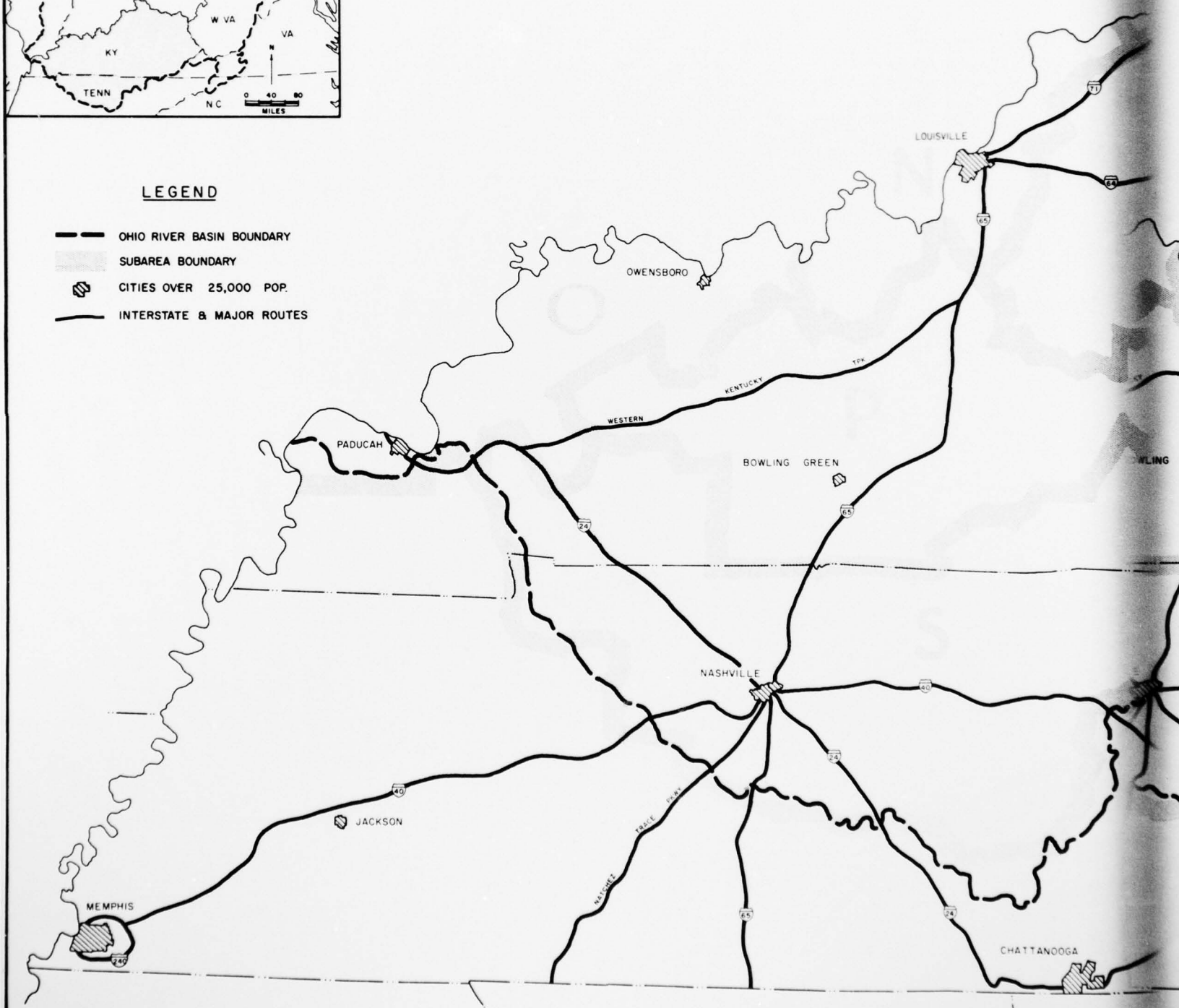
**WEST VIRGINIA
MARYLAND, VIRGINIA & NORTH CAROLINA
INTERSTATE ROUTE SYSTEM
OHIO RIVER BASIN**

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
Lake Central Region Ann Arbor, Mich.
BOR July, 1965



LEGEND

- OHIO RIVER BASIN BOUNDARY
- SUBAREA BOUNDARY
- CITIES OVER 25,000 POP.
- INTERSTATE & MAJOR ROUTES





**KENTUCKY & TENNESSEE
INTERSTATE ROUTE SYSTEM
OHIO RIVER BASIN**

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
Lake Central Region Ann Arbor, Mich.
BOR

July, 1965

ILLINOIS

U.S. Forest Service

- 1. Pounds Hollow Recreation Area
- 2. Lake Glendale Recreation Area
- 3. Lincoln Memorial

U.S. Fish and Wildlife Service

- 4. Crab Orchard National Wildlife Area

State Parks

- 5. Dixon Springs
- 6. Fort Massac
- 7. Cave-In-Rock
- 8. Farmington
- 9. Red Hills
- 10. Kankakee River
- 11. Lincoln Trail
- 12. Giant City
- 13. Splitter Woods
- 14. Spring
- 15. Starved Rock
- 16. Buffalo Rock
- 17. Chain of Lakes
- 18. Lincoln's New Salem
- 19. Matthiessen State Park Nature Area

State Recreation Areas

- 20. Fox Ridge
- 21. Kickapoo
- 22. Lake Murphysboro
- 23. Grand Haven
- 24. Ramsey Lake
- 25. Nelson Springs
- 26. Tiller
- 27. Champaign Parkway
- 28. Illinois Beach
- 29. Des Plaines

State Conservation Areas

- 30. Wolf Lake
- 31. Horseshoe Lake
- 32. Union
- 33. Woodford County
- 34. Marshall County
- 35. Sparland
- 36. Froberg's County
- 37. Chain of Lakes
- 38. Jasper County
- 39. Hamilton County Lake
- 40. Kokeny Lake
- 41. Saline County
- 42. Spring Branch
- 43. Washington County
- 44. Wayne County
- 45. Hermit Lake

State Forests

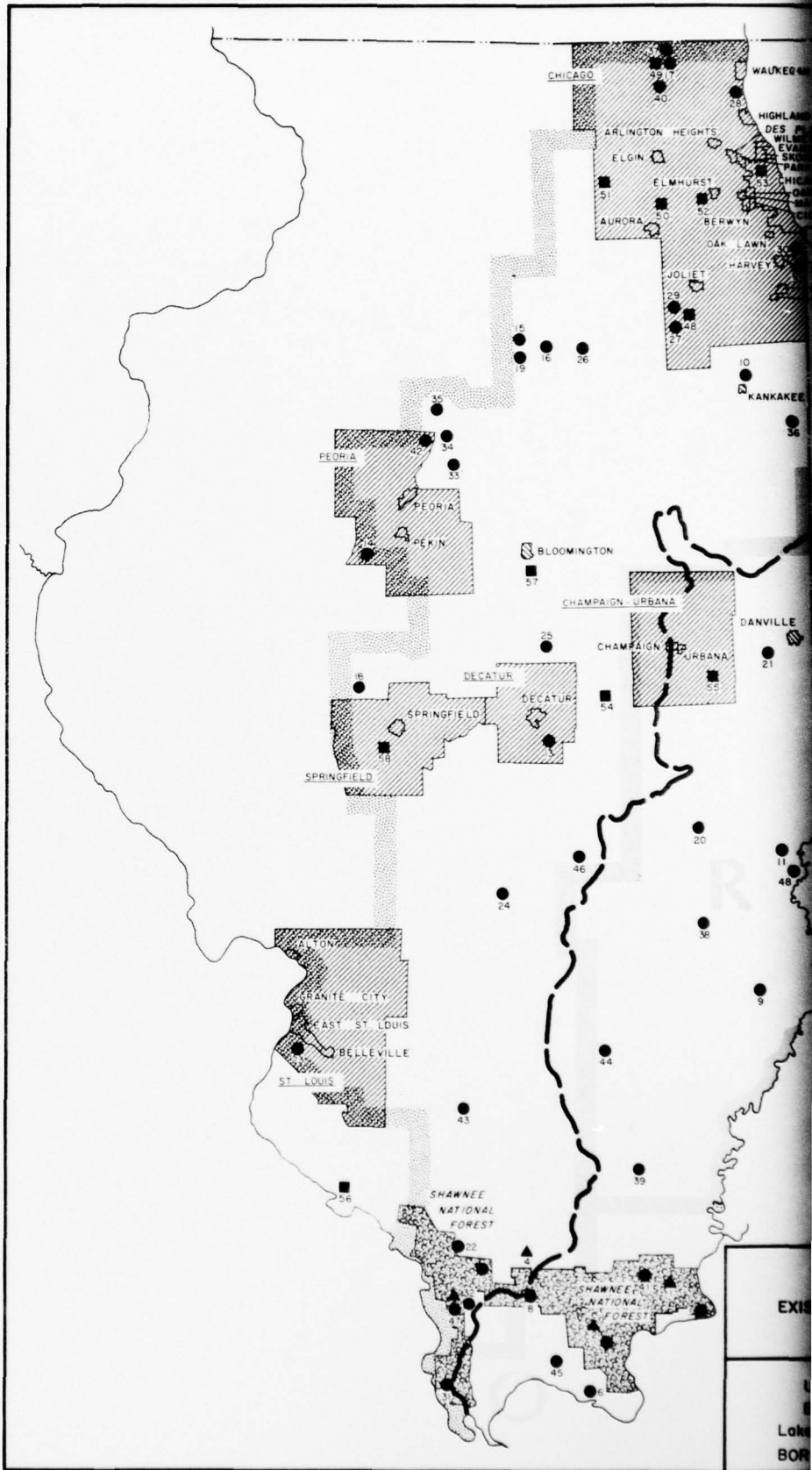
- 46. Shelby County
- 47. Union

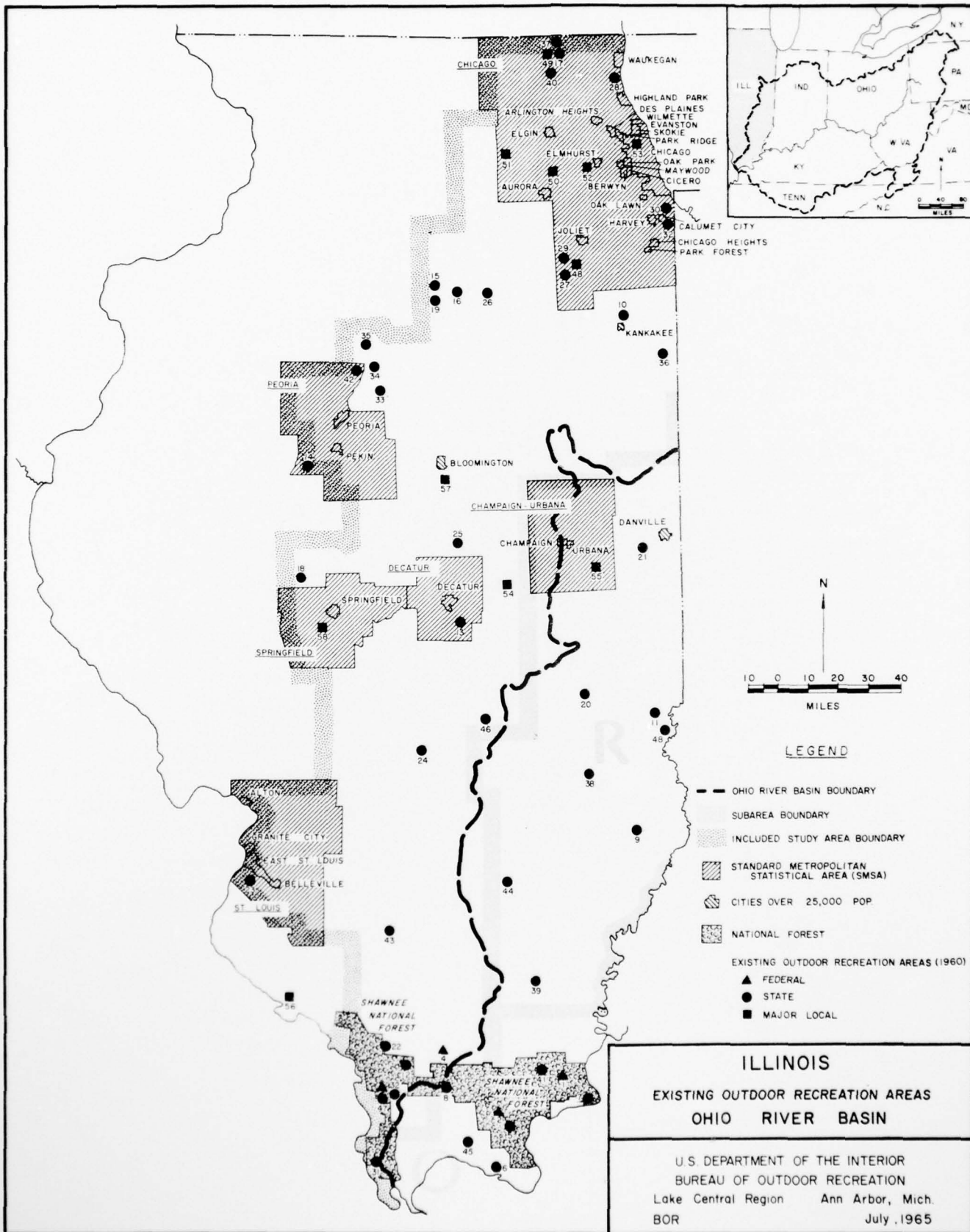
Major Local Areas

- County Forest Preserves:
- 48. Will
 - 49. Lake
 - 50. Kane
 - 51. DeKalb
 - 52. DuPage
 - 53. Cook
 - 54. Willard
 - 55. Champaign

Local Parks

- 56. Roosevelt Park
- 57. Lake Buckingham Park
- 58. Lake Springfield





2

INDIANA

Corps of Engineers

1. Cagles Mill Reservoir
2. Mansfield Reservoir

National Park Service

3. Lincoln Boyhood National Monument

U.S. Forest Service

- Hoosier National Forest
4. German Ridge Recreation Area
5. Buzzard Roost Recreation Area

State Parks

6. Indiana Dunes
7. Pokagon
8. Tippecanoe River
9. Kankakee
10. Turkey Run
11. Shades
12. Mounds
13. Whitewater
14. Versailles
15. Clifty Falls
16. Brown County
17. McCormick's Creek
18. Lieber
19. Spring Mill
20. Lincoln

State Recreation Areas

21. Raccoon Lake
22. Muscatatuck
23. Shakamak
24. Scates Lake
25. Bass Lake
26. Ouabaches

State Fish and Game Areas

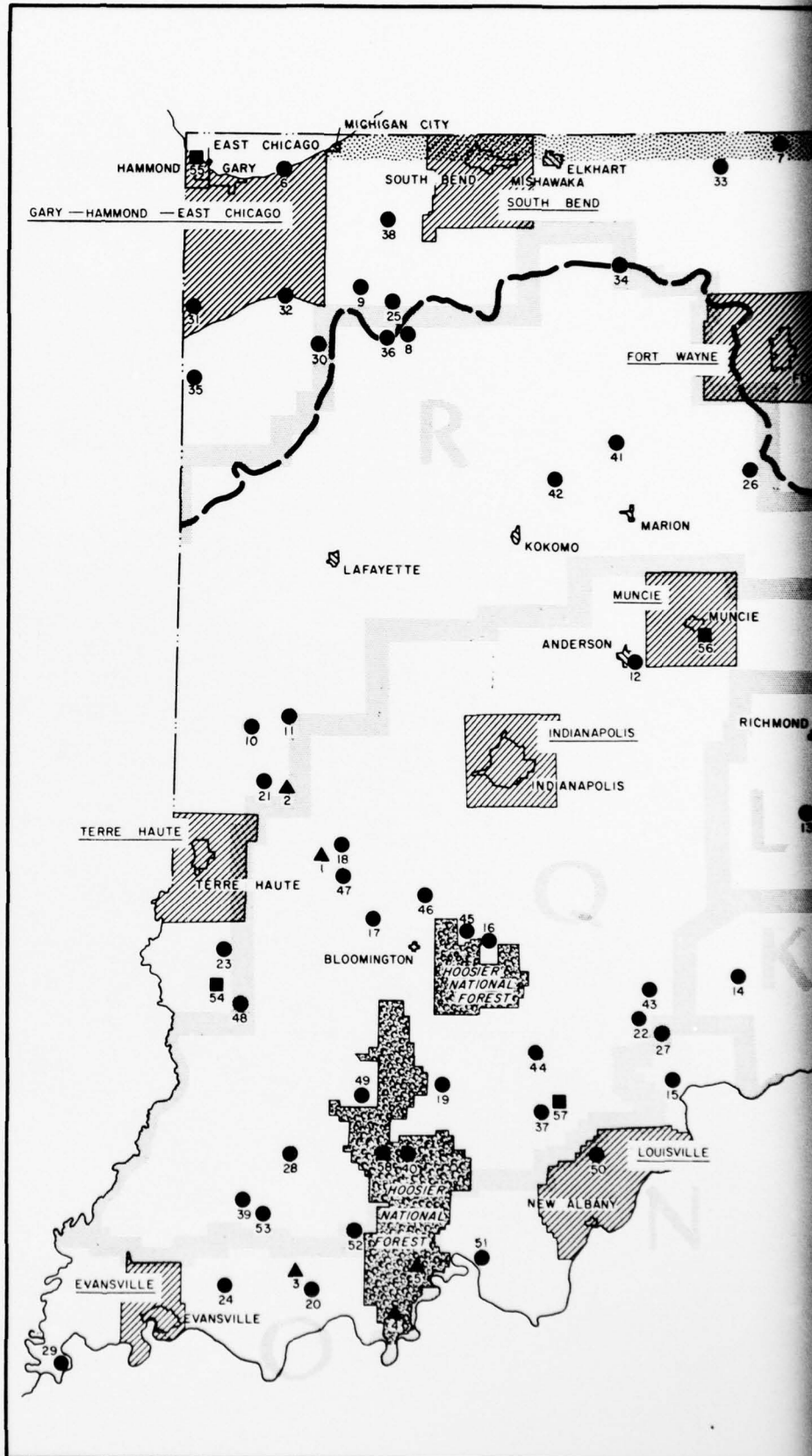
27. Crosley
28. Glendale
29. Hovey Lake
30. Jasper-Pulaski
31. Coon Marsh
32. LaSalle
33. Pigeon River
34. Tri County
35. Willow Slough
36. Winamac
37. Elk Creek
38. Kingsbury
39. Patoka
40. Spring Valley

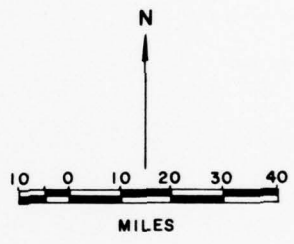
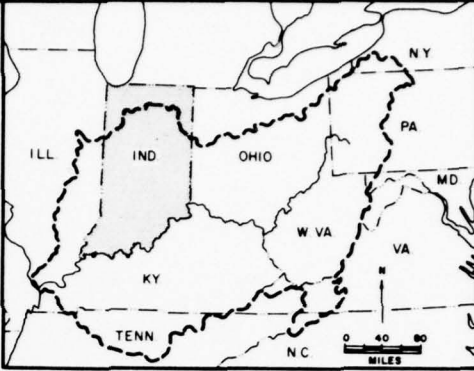
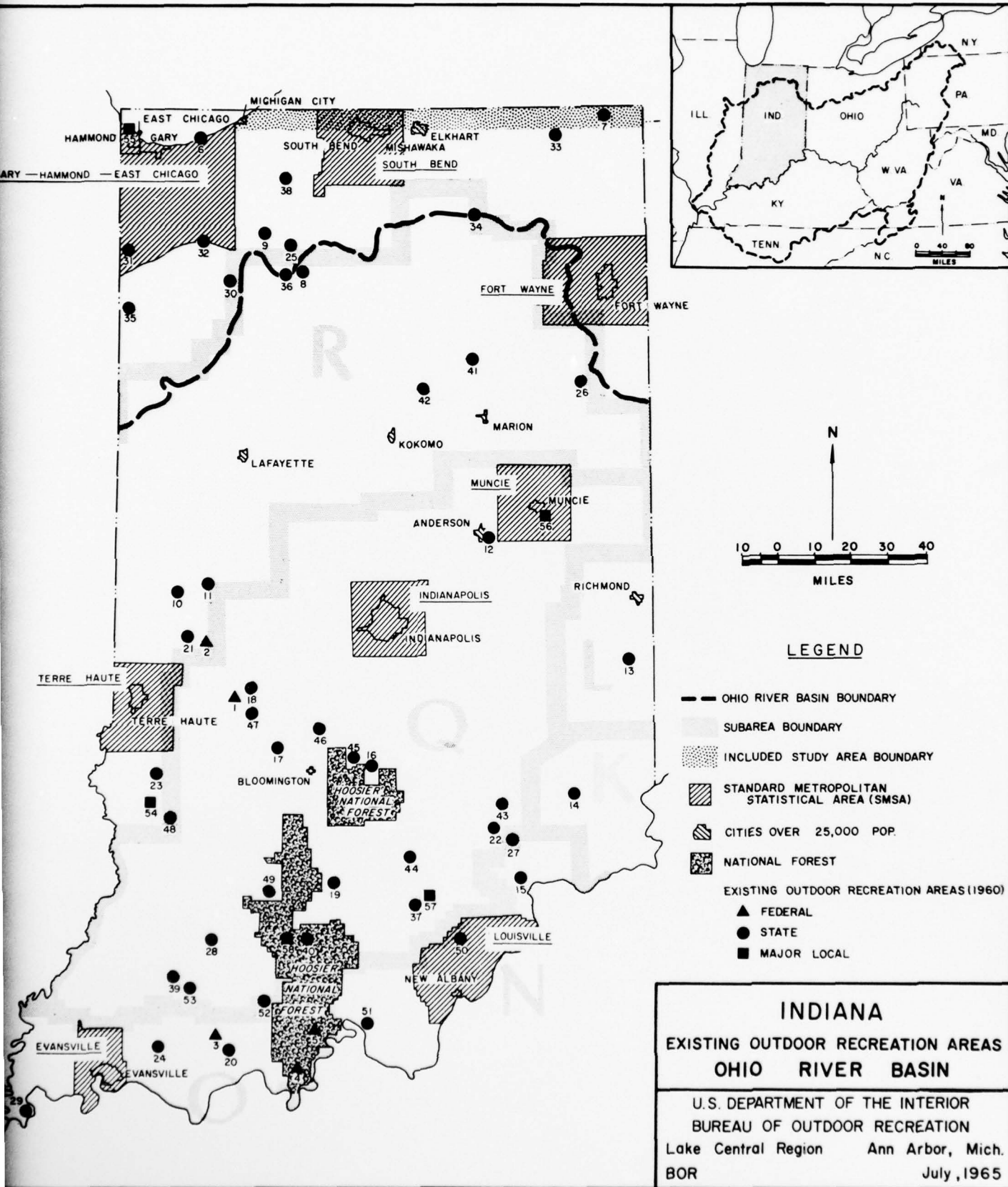
State Forests

41. Salomonie River
42. Francis Slocum
43. Selmier
44. Jackson
45. Yellowwood
46. Morgan-Monroe
47. Owen-Putnam
48. Green-Sullivan
49. Martin
50. Clark
51. Harrison-Crawford
52. Ferdinand
53. Pike

Major Local Areas

54. Sullivan County Park
55. Wolf Lake
56. Prairie Park
57. Elk Creek
58. French Lick Creek





LEGEND

- OHIO RIVER BASIN BOUNDARY
- SUBAREA BOUNDARY
- ▨ INCLUDED STUDY AREA BOUNDARY
- ▨ STANDARD METROPOLITAN STATISTICAL AREA (SMSA)
- ▨ CITIES OVER 25,000 POP.
- ▨ NATIONAL FOREST
- EXISTING OUTDOOR RECREATION AREAS (1960)
 - ▲ FEDERAL
 - STATE
 - MAJOR LOCAL

OHIO

Corps of Engineers

1. Berlin Reservoir
2. Delaware Reservoir
3. Mosquito Creek Reservoir
4. Tom Jenkins Reservoir
5. West Fork Reservoir

National Park Service

6. Perry's Victory and International Peace Monument
7. Mound City Group National Monument

U.S. Fish and Wildlife Service

8. West Sister Island National Wildlife Refuge

U.S. Forest Service

- Wayne National Forest Recreation Areas
9. Vesuvius

State Parks and Recreation Areas

10. Findley State Park
11. Forked Run State Park
12. Lake Hope State Park
13. Jefferson Lake State Park
14. Lake Alma State Park
15. Madison Lake State Park
16. Mount Gilead State Park
17. Roosevelt State Park
18. Scioto Trail State Park
19. South Bass Island State Park
20. Strouds Run State Park
21. Lake White State Reserve
22. Van Buren Lake State Park
23. Tar Hollow State Park
24. A. W. Marion State Park
25. Clear Fork State Park
26. Burr Oak State Park
27. Buckeye Lake State Park
28. Beaver Creek State Park
29. Harrison Lake State Park
30. Gowen Lake State Park
31. Gullford Lake State Park
32. East Harbor State Park
33. John Bryan State Park
34. Hocking State Park
35. Hueston Woods State Park
36. Independence Dam State Park
37. Indian Lake State Park
38. Kelleys Island State Park
39. Kiser Lake State Park
40. Lake Lorain State Park
41. Nelson-Kennedy State Park
42. Pike Lake State Park
43. Portage Lake State Park
44. Punderson Lake State Park
45. Rocky Fork State Park
46. St. Mary State Park
47. Stonelick Creek State Park
48. Adams Lake State Reserve
49. Bark Camp State Park
50. Blue Rock State Park
51. Catawaba State Park
52. Big Creek State Reserve
53. Pymatuning State Park
54. Crane Creek State Park
55. Headlands State Park

State Forests

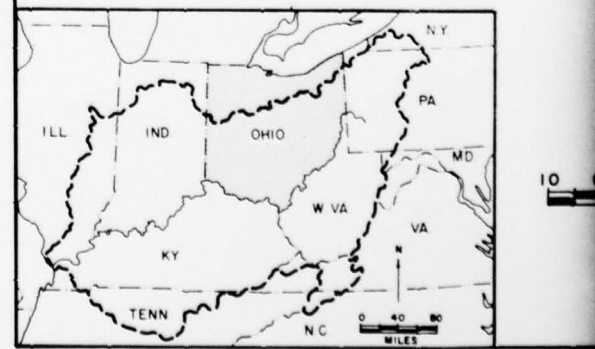
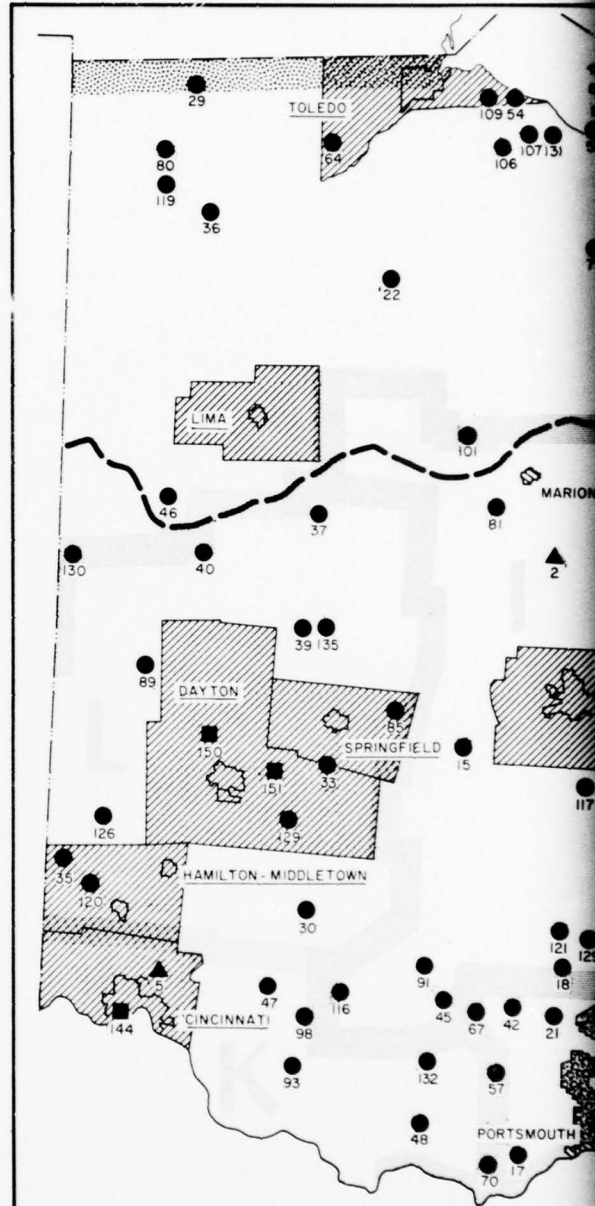
56. Wolf Run Area
57. Bruck Creek
58. Blue Rock
59. Waterloo
60. Sunfish Creek
61. Shade River
62. Mohican Memorial
63. Yellow Creek
64. Maumee
65. Hocking
66. Richland Furnace
67. Pike
68. Tar Hollow
69. Scioto Trail
70. Shawnee
71. Zaleski
72. Raccoon
73. Dean
74. Chapin
75. Gifford

State Fish and Wildlife Areas

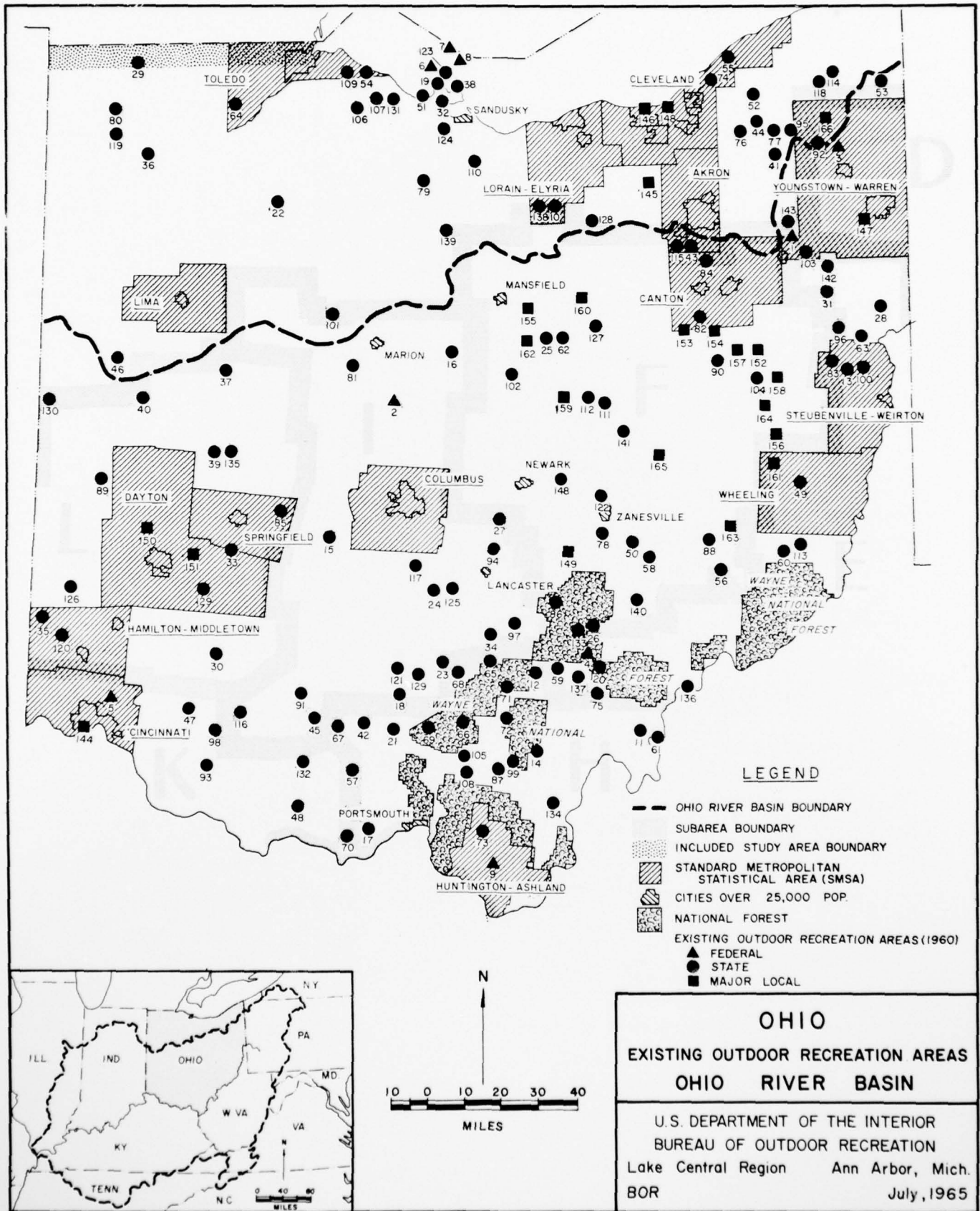
76. Aquilla Lake
77. Auburn Marsh
78. Avondale
79. Basic Incorporated
80. Beaver Creek
81. Big Island
82. Bolivar Reservoir
83. Brush Creek
84. Canal Fulton
85. Clark Lake
86. Clouse Lake
87. Coopers Millow
88. Cumersville
89. Darke Co. Lake
90. Dover
91. Fallsville
92. Grand River
93. Grand Lake
94. Greenfield Dam
95. Hamdon Orchard
96. Highlandtown
97. Hocking Lake
98. Indian
99. Jackson Lake St. Reserve
100. Kaul
101. Killdeer Plains
102. Knox Lake
103. Lake Park
104. Leesville
105. Liberty
106. Little Portage River
107. McGee Marsh
108. Mead
109. Metzger Marsh
110. Milan
111. Mohawk
112. Mohican River
113. Monroe Lake
114. New Lyme
115. Nimsilla Reservoir
116. Oldaker
117. Old Canal
118. Orwell
119. Osbow Lake
120. Pater Lake
121. Pleasant Valley
122. Powelson
123. Put-In-Bay Hatchery
124. Rast Haven
125. Rock Mill Dam
126. Rush Run
127. Shrave Lake
128. Spencer Lake
129. Spring Valley
130. St. Mary's Lake
131. Toussaint Creek
132. Tranquillity
133. Trible
134. Tycoon Lake
135. Urbana Game Farm
136. Veto
137. Waterloo
138. Wellington
139. Willard Marsh
140. Wolf Creek
141. Woodbury
142. Zepernick Lake
143. Berlin Reservoir

Major Local Areas

144. Winton Woods County Park
 145. Hincley Reservation
 146. Rocky River Reservation
 147. Mill Creek Park
 148. Providence Park
 149. Perry County Reclamation Area
 150. Englewood Dam Park
 151. Huffman Dam Park
 152. Atwood Reservoir*
 153. Beach City Reservoir*
 154. Bolivar Reservoir*
 155. Charles Mills Reservoir*
 156. Clendenen Reservoir*
 157. Dover Reservoir*
 158. Leesville Reservoir*
 159. Mohawk Reservoir*
 160. Mohicanville Reservoir*
 161. Pladent Reservoir*
 162. Pleasant Hill Reservoir*
 163. Senecaville Reservoir*
 164. Tappan Reservoir*
 165. Willis Creek Reservoir*
 166. Trumbull County Metropolitan Park
- *Muskingum Conservancy District



ENF DRD



ENF DRD

Plate 11

2

NEW YORK

State Parks

1. Buckhorn Island
2. Lake Erie
3. Evangola
4. Niagara Reservation
5. Devil's Hole
6. Whirlpool
7. Beaver Island
8. Cuba Reservation
9. Allegany

State Forests

10. Chautauque Reforestation
11. Cattaraugus Reforestation
12. Allegany Reforestation

State Fish and Game Areas

13. Carlton Hill

PENNSYLVANIA

Corps of Engineers

14. East Branch Clarion Reservoir
15. Tionesta Reservoir
16. Alvin R. Dush Reservoir
17. Youghiogheny River Reservoir
18. Mahoning Creek Reservoir
19. Crooked Creek Reservoir
20. Conemaugh River Reservoir
21. Loyalhanna Reservoir

National Park Service

22. Fort Necessity Battlefield

U.S. Fish and Wildlife Service

23. Erie National Wildlife Refuge

U.S. Forest Service

Allegheny National Forest

Recreation Areas

24. Maple Run
25. Corduroy
26. Pipe Bridge
27. Twin Lakes
28. Bear Creek
29. Corduroy
30. Loleta
31. Wagner Run
32. Landman's Corners
33. Seldom Soan
34. Groefly Farm
35. Camp Nine
36. Kelley Pines
37. Watson Run
38. Amster
39. Blue Jay
40. Hill Farm
41. Porter Farm Spring
42. Porter Farm
43. Glasner Run
44. Hoffman Farm
45. Camp Oimfoad
46. Camp Cornplanter
47. Camp Run
48. Red Bridge
49. Lewis Run
50. Kennedy Springs
51. Jakes Rocks
52. Allegheny Picnic
53. Buckletoons
54. Hawks Gorge
55. Minister Creek
56. Harrison Run
57. Sandstone Springs
58. Camp Birdsell

County Units

59. Elk County
60. Forest County
61. McKean County
62. Warren County

State Parks

63. Kooser
64. Laurel Mountain
65. Lim Run
66. Keystone
67. Crooked Creek
68. Raccoon Creek
69. Laurel Hill
70. McConnells Hill
71. Pymatuning
72. Bandigo
73. Chapman Dam
74. Cook Forest
75. Clear Creek
76. S. B. Elliott
77. Parker Dam
78. Sinnemahoning
79. Sizerville
80. Ravinburg
81. Bucktail
82. Hyner Run
83. Kettle Creek
84. Ole Bull
85. Lyman Run
86. Denton Hill
87. Presque Isle
88. Black Moshannon
89. Blue Knob
90. Trough Creek
91. Warrior's Path
92. Shawnee
93. Poe Valley
94. Whipple Dam
95. Greenwood Furnace
96. Cowan's Gap

State Forests

97. Forbes
98. Gallitzin
99. Mount Davis
100. Elk
101. Corn Planter
102. Kittanning
103. Black Moshannon
104. Susquehannock
105. Sprout
106. Bald Eagle
107. Bear Meadows
108. Detweiler Run
109. Alan Soeger
110. Rothrock
111. Buchanan

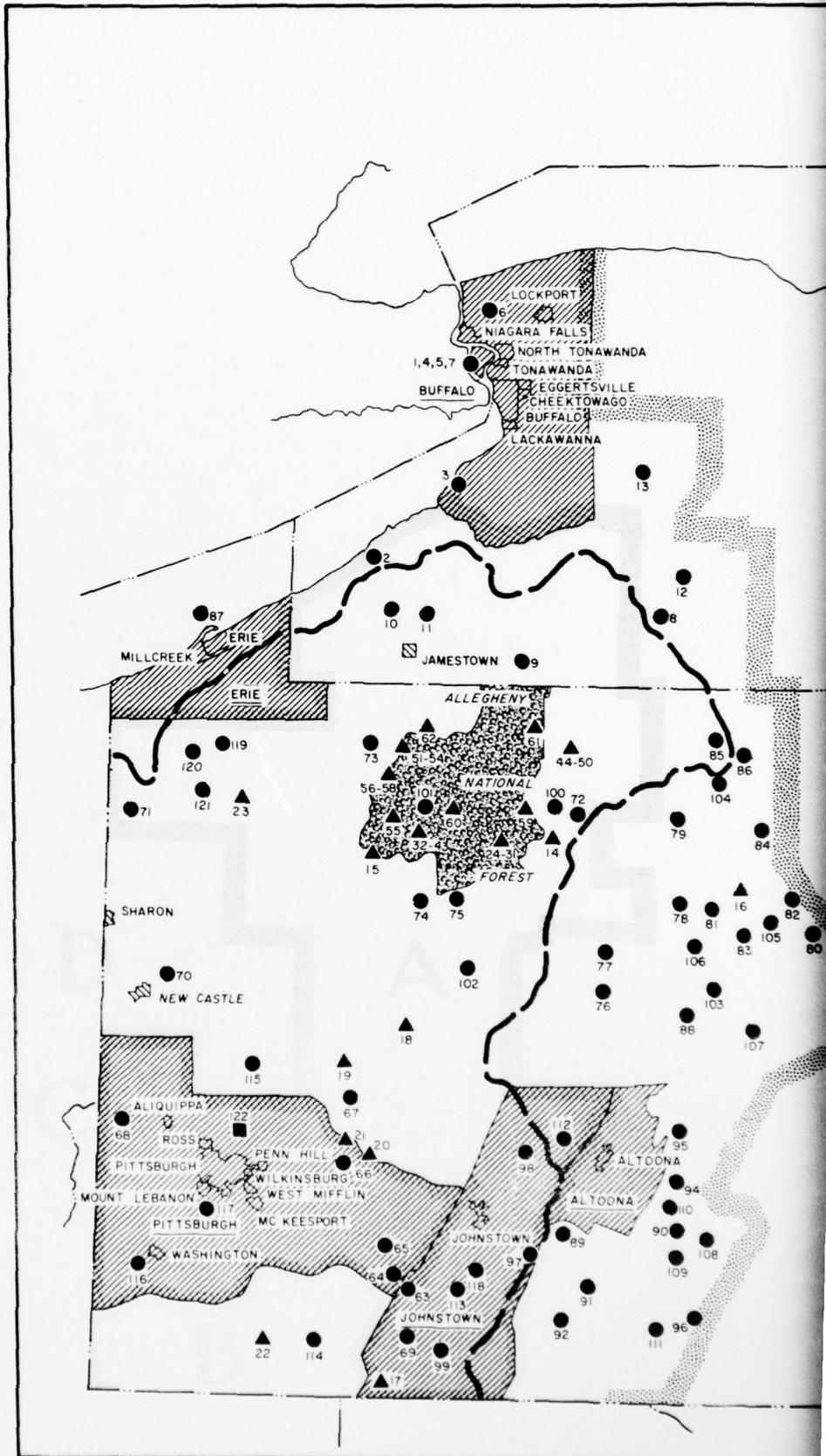
State Fish Commission

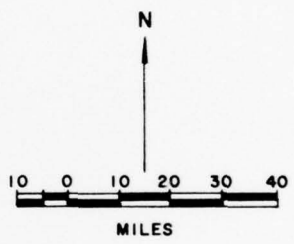
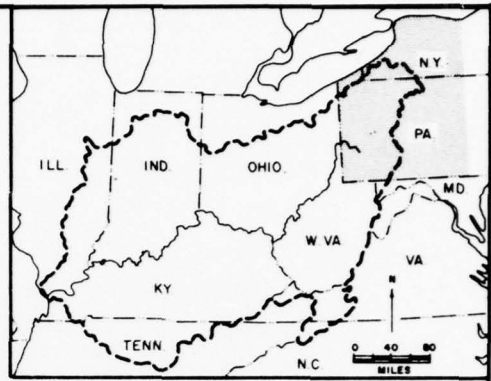
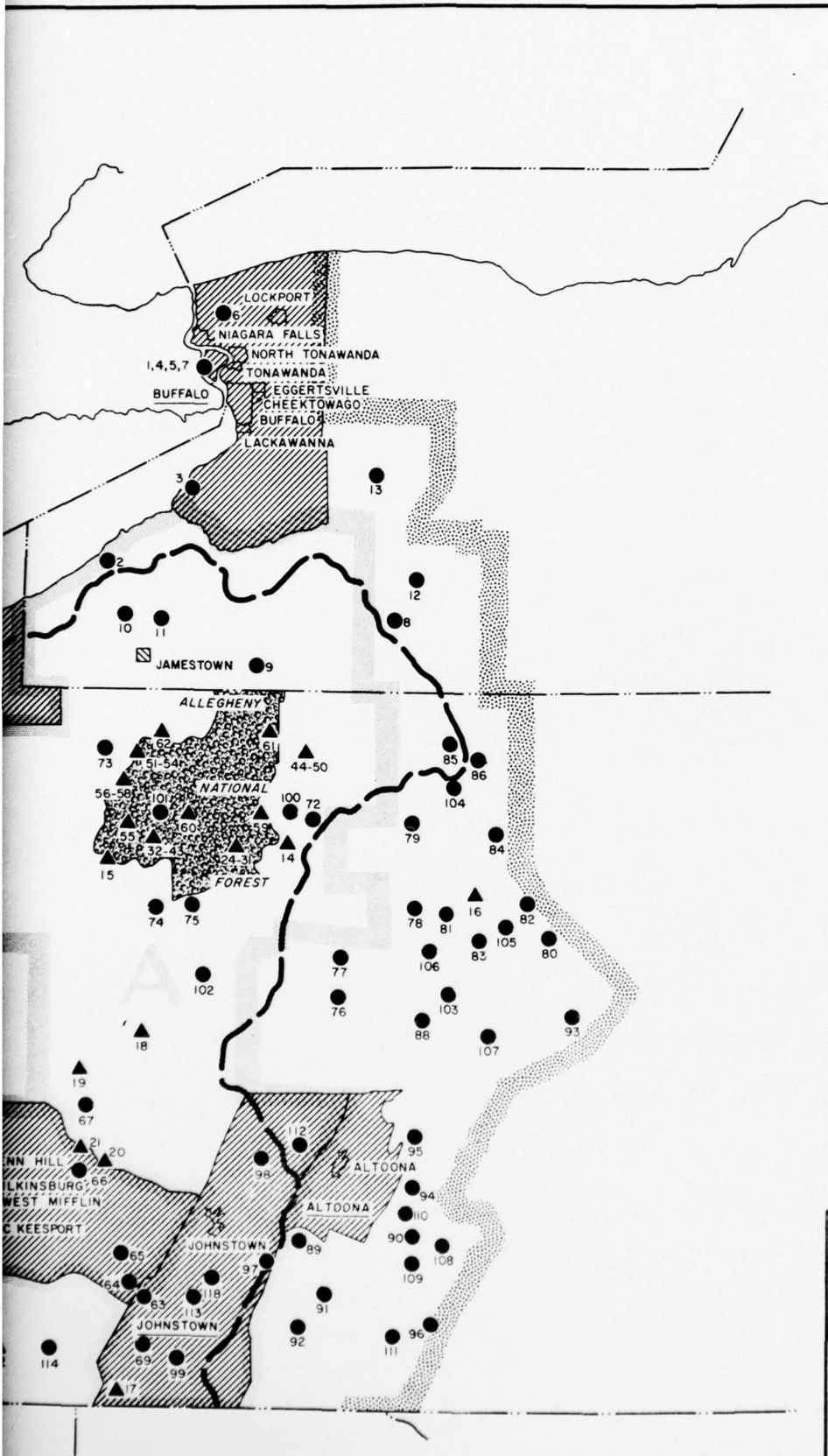
Recreation Areas

112. Dunan Dam
113. Lake Somerset
114. Virgin Sun Lake
115. Glade Run Lake
116. Dutch Fork Lake
117. Canoeburg Lake
118. Cranberry Glade Lake
119. Drakes Hill Dam
120. Cretchide Springs
121. Madville Access

Allegheny County Park Department

122. North Park





LEGEND

- OHIO RIVER BASIN BOUNDARY
- ▭ SUBAREA BOUNDARY
- ▨ INCLUDED STUDY AREA BOUNDARY
- ▩ STANDARD METROPOLITAN STATISTICAL AREA (SMSA)
- ▧ CITIES OVER 25,000 POP.
- ▦ NATIONAL FOREST
- EXISTING OUTDOOR RECREATION AREAS (1960)
 - ▲ FEDERAL
 - STATE
 - MAJOR LOCAL

**PENNSYLVANIA & NEW YORK
EXISTING OUTDOOR RECREATION AREAS
OHIO RIVER BASIN**

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
Lake Central Region Ann Arbor, Mich.
BOR July, 1965

2

WEST VIRGINIA

Corps of Engineers

- 1. Sutton Reservoir
- 2. Tygart Reservoir
- 3. Gallipolis Lock and Dam
- 4. Bluestone Reservoir

U.S. Forest Service

- 5. George Washington National Forest
- 6. Monongahela National Forest

State Parks

- 7. Tygart Lake
- 8. Babcock
- 9. Tomlinson Run
- 10. Mont Chataou
- 11. Cathedral
- 12. Blackwater Falls
- 13. Watters Smith
- 14. Audra
- 15. North Bend
- 16. Hawk's Nest
- 17. Cedar Creek
- 18. Holly River
- 19. Carnifex Ferry
- 20. Droop Mountain
- 21. Watoga
- 22. Grandview
- 23. Pinnacle Rock
- 24. Bluestone

State Forests

- 25. Cabwaylingo
- 26. Graebrier
- 27. Kumbrow
- 28. Seneca
- 29. Calvin Price
- 30. Camp Creek
- 31. Coopers Rock
- 32. Kanawha
- 33. Panther Creek

State Fish and Game Areas

- 34. Bluestone
- 35. Elk River
- 36. Bear Rocks
- 37. Teter Creek Lake
- 38. Pleasants Creek
- 39. Horner
- 40. McClintic
- 41. Chief Cornstalk
- 42. Plum Orchard
- 43. Laurel Creek

Major Local Areas

- 44. Oglebay Park
- 45. Coonskin Park
- 46. Camp Mad Anthony Wayne
- 47. Little Beaver

VIRGINIA

Corps of Engineers

- 48. Philpott Reservoir

National Park Service

- 49. Booker T. Washington
- 50. Blue Ridge Parkway
- 51. Smart View
- 52. Mabry Mill
- 53. Rocky Knob

U.S. Forest Service

- 54. Jefferson National Forest
- 55. George Washington National Forest

State Parks

- 56. Fairy Stone
- 57. Douthat
- 58. Claytor Lake

Wildlife Area

- 59. Gathright

NORTH CAROLINA

National Park Service

- Blue Ridge Parkway (50)
- 60. Cumberland Knob
- 61. Doughton Park
- 62. Cherry Hill
- 63. Moses H. Cone
- 64. Julian Price

U.S. Forest Service

- 65. Cherokee National Forest
- 66. Pisgah National Forest

State Parks

- 67. Mt. Jefferson

MARYLAND

State Parks and Recreation Areas

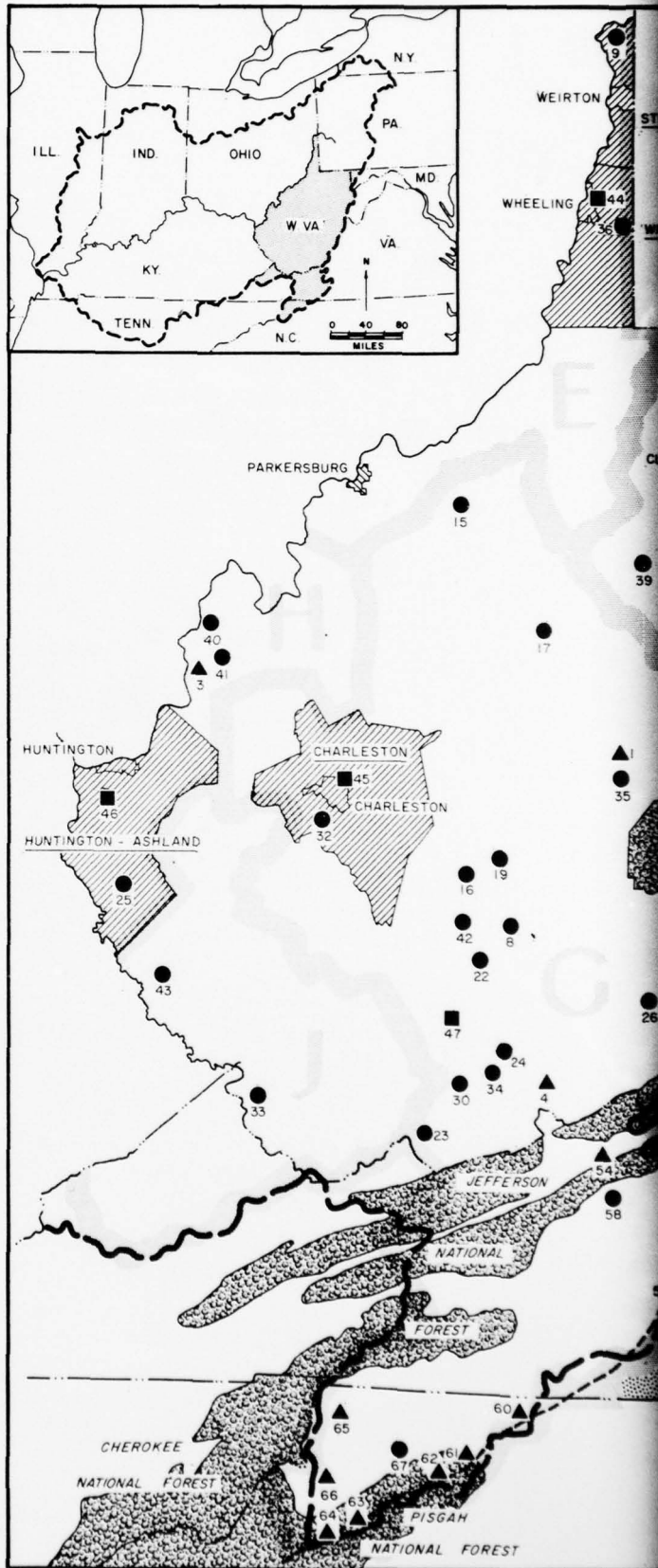
- 68. Swallow Falls
- 69. Deep Creek Lake
- 70. Big Run
- 71. New Germany
- 72. Dans Mountain
- 73. Rocky Gap
- 74. Castlemans Bridge

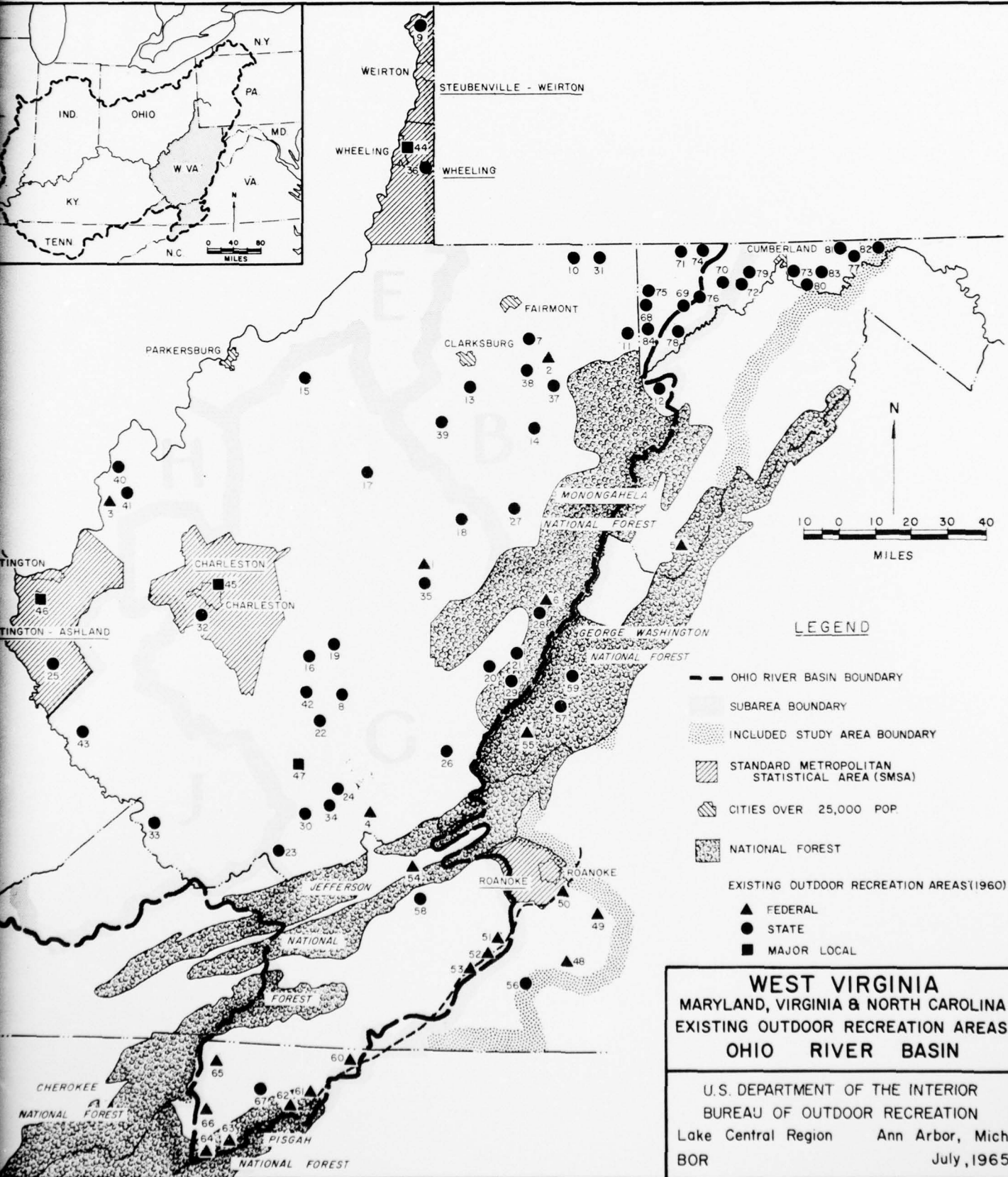
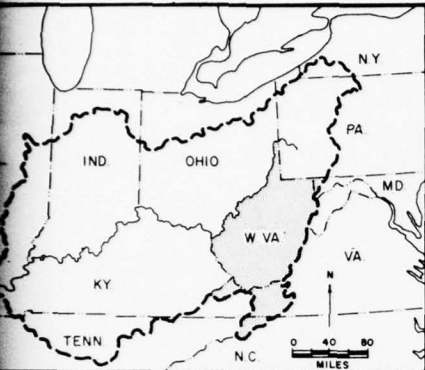
State Forests

- 75. Swallow Falls
- 76. Savage River
- 77. Green Ridge
- 78. Potomac

State Game and Fisheries Areas

- 79. Dans Mountain
- 80. Warrior Mountain
- 81. White Sulphur Pond
- 82. Belle Grove
- 83. Bill Meyer
- 84. Mt. Nebo





LEGEND

- OHIO RIVER BASIN BOUNDARY
- SUBAREA BOUNDARY
- ▨ INCLUDED STUDY AREA BOUNDARY
- ▨ STANDARD METROPOLITAN STATISTICAL AREA (SMSA)
- ▨ CITIES OVER 25,000 POP.
- ▨ NATIONAL FOREST
- EXISTING OUTDOOR RECREATION AREAS (1960)
 - ▲ FEDERAL
 - STATE
 - MAJOR LOCAL

**WEST VIRGINIA
MARYLAND, VIRGINIA & NORTH CAROLINA
EXISTING OUTDOOR RECREATION AREAS
OHIO RIVER BASIN**

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
Lake Central Region Ann Arbor, Mich.
BOR July, 1965

2

Corps of Engineers

1. Buckhorn Reservoir
2. Lake Cumberland (Wolf Creek Dam)
3. Dewey Reservoir

National Park Service

4. Mammoth Cave National Park
5. Cumberland Gap National Historical Park
6. Abraham Lincoln Birthplace National Historic

U.S. Fish and Wildlife Service

7. Kentucky Woodland National Wildlife Refuge

U.S. Forest Service

8. Cumberland National Forest
9. Jefferson National Forest

State Parks

10. Pine Mountain
11. Big Bone Lick
12. General Butler
13. Carter Caves
14. Pennyrile Forest
15. Jenny Wiley
16. Greenbo Lake
17. Audubon
18. Levi Jackson Wilderness
19. My Old Kentucky Home
20. Natural Bridge
21. Lake Cumberland
22. Cumberland Falls

Breaks Interstate Commission

23. Breaks Interstate

State Forests

24. Olympia
25. Kentucky Ridge
26. Knobs
27. Tygarts
28. Kaintania
29. Dewey Lake
30. Pennyrile

State Fish and Wildlife Areas

31. Beaver Creek Lake
32. Jones-Keoney Game Management Area
33. Lake Deshoar
34. Carpenter Lake
35. Old Kingfisher - New Kingfisher
36. Robinson Forest
37. Elliott County Sportsman Lake
38. Franklin County Game Area
39. Boltz Lake
40. Bullock Pen Lake
41. Williamstown Lake
42. Henderson Wildlife Area
43. Henry County Rod and Gun Club Lake
44. McNeely Lake
45. Mullins Wildlife Management Area
46. Pine Mountain Game Area
47. Central Kentucky Management Area
48. Marion County Sportsman Lake
49. Mud River No. 51
50. Lake Washburn
51. Elmer Davis Lake
52. Klaber Sanctuary
53. Lake Malone
54. Pulaski County Lake
55. Guist Creek Lake
56. Taylor County Sportsman Lake
57. Shanty Hollow Lake

Major Local Areas

58. North Fork Little River No. 5

TENNESSEE

Corps of Engineers

1. Center Hill Reservoir
2. Cheatham Reservoir
3. Dale Hollow Reservoir
4. Old Hickory Reservoir

National Park Service

5. Natchez Trace Parkway
6. Fort Donelson National Military Park
7. Fort Donelson National Cemetery
8. Stones River National Battlefield
9. Stones River National Cemetery

State Parks

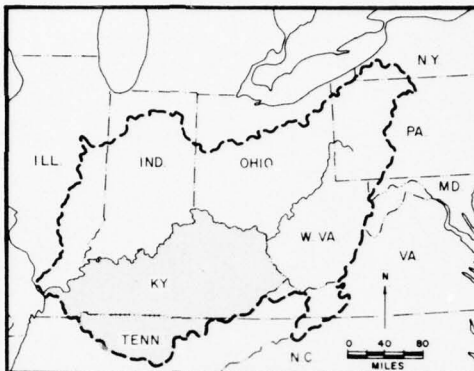
10. Cedars of Lebanon
11. Falls Creek Falls
12. Standing Stone
13. Montgomery Bell
14. Pickett

State Forests

15. Stewart
16. Scott

State Fish and Game Areas

17. Cheatham Reservoir
18. Old Hickory Reservoir
19. Cheatham Wildlife Area
20. Burgess Falls
21. Marrowbone Lake

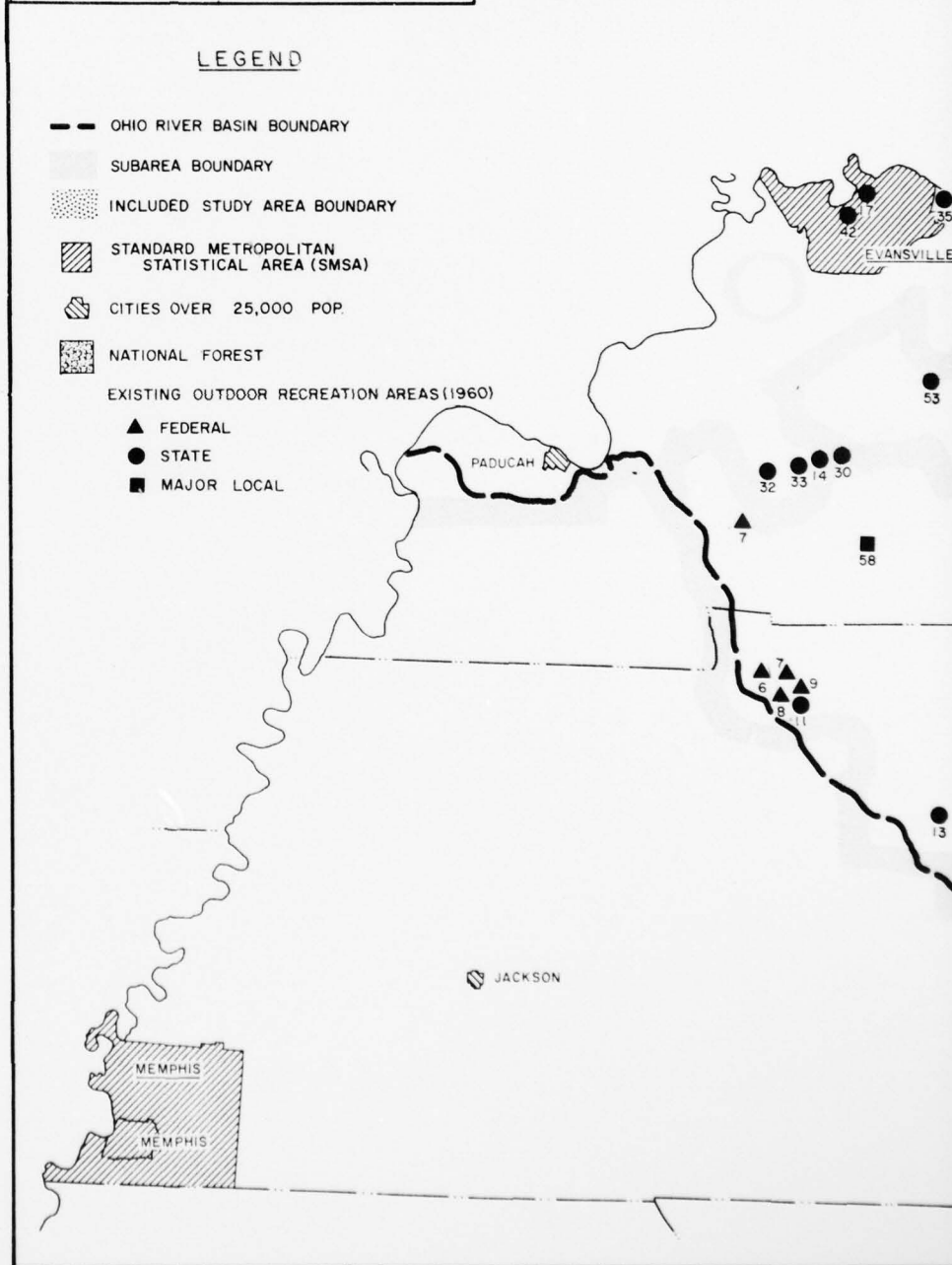


LEGEND

- OHIO RIVER BASIN BOUNDARY
- SUBAREA BOUNDARY
- ▨ INCLUDED STUDY AREA BOUNDARY
- ▩ STANDARD METROPOLITAN STATISTICAL AREA (SMSA)
- CITIES OVER 25,000 POP
- ▩ NATIONAL FOREST

EXISTING OUTDOOR RECREATION AREAS (1960)

- ▲ FEDERAL
- STATE
- MAJOR LOCAL



AD-A041 277

ARMY ENGINEER DIV OHIO RIVER CINCINNATI
OHIO RIVER BASIN COMPREHENSIVE SURVEY. VOLUME IX. APPENDIX H. 0--ETC(U)
JUN 66

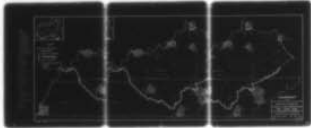
F/G 8/6

UNCLASSIFIED

NL

3 OF 3

AD
A041277

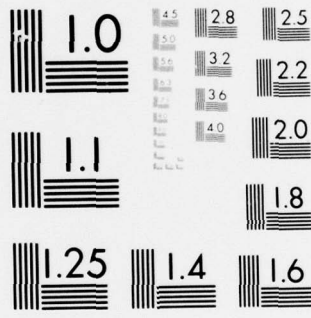


END

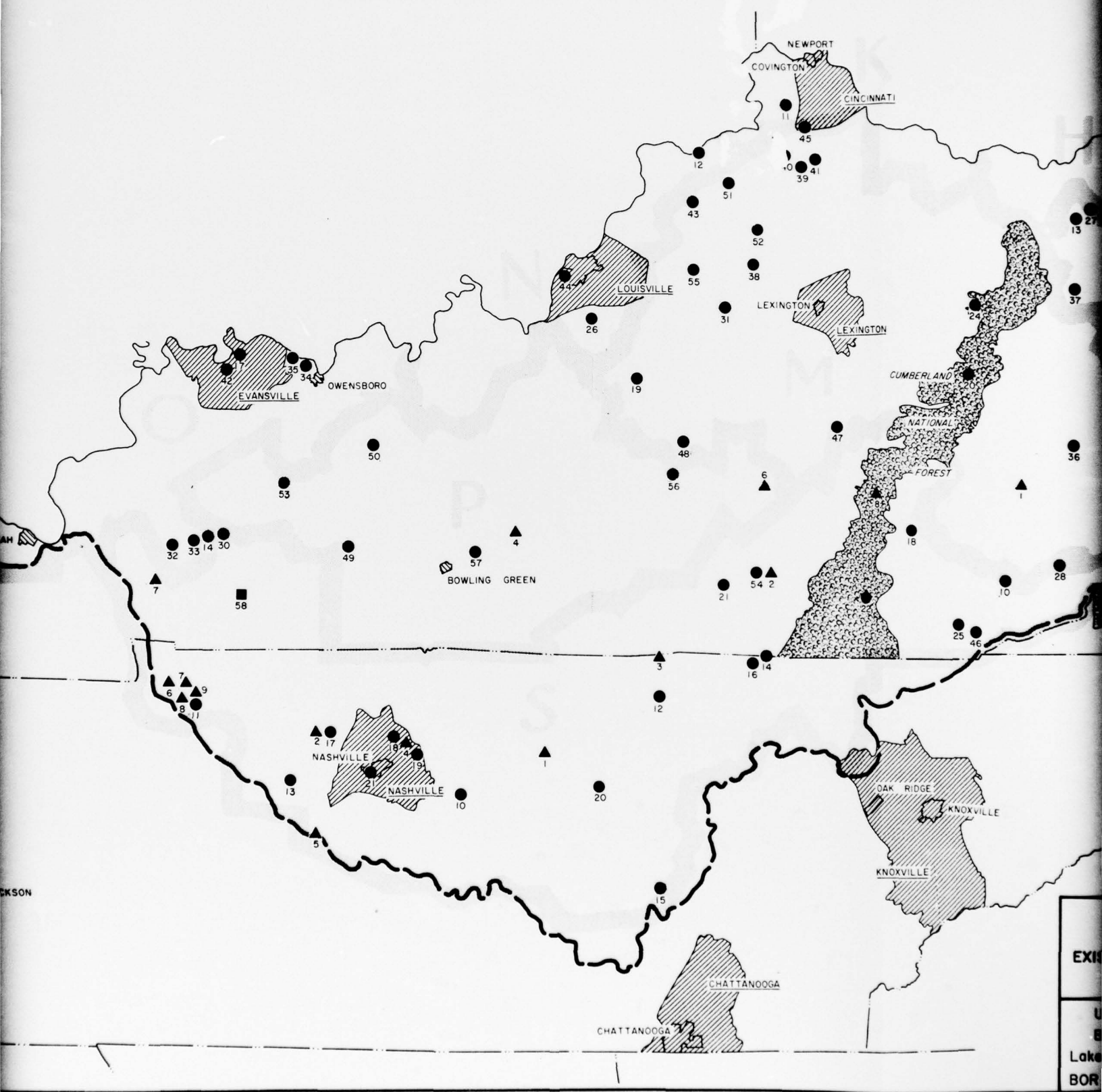
DATE

FILMED

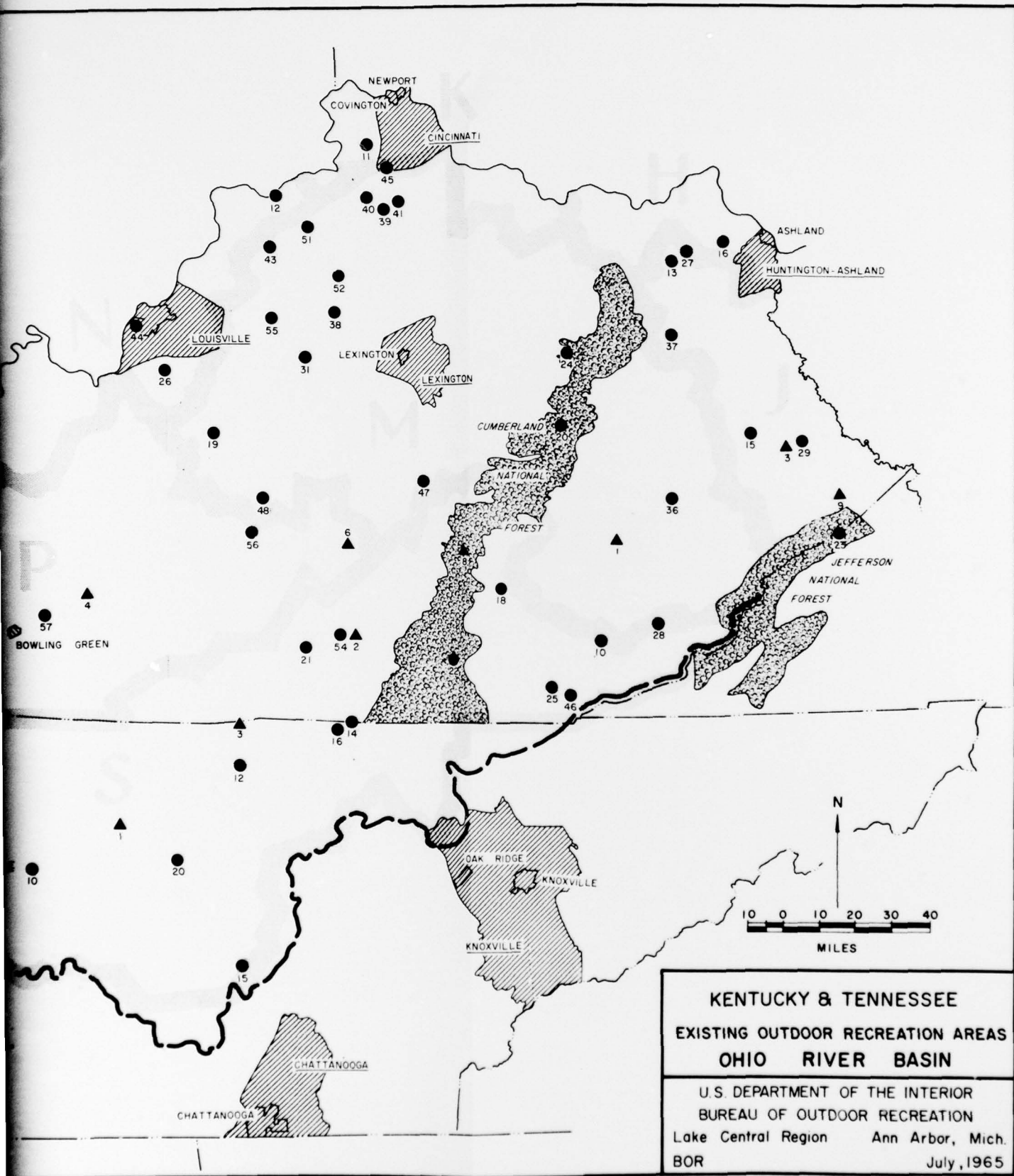
7-77



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

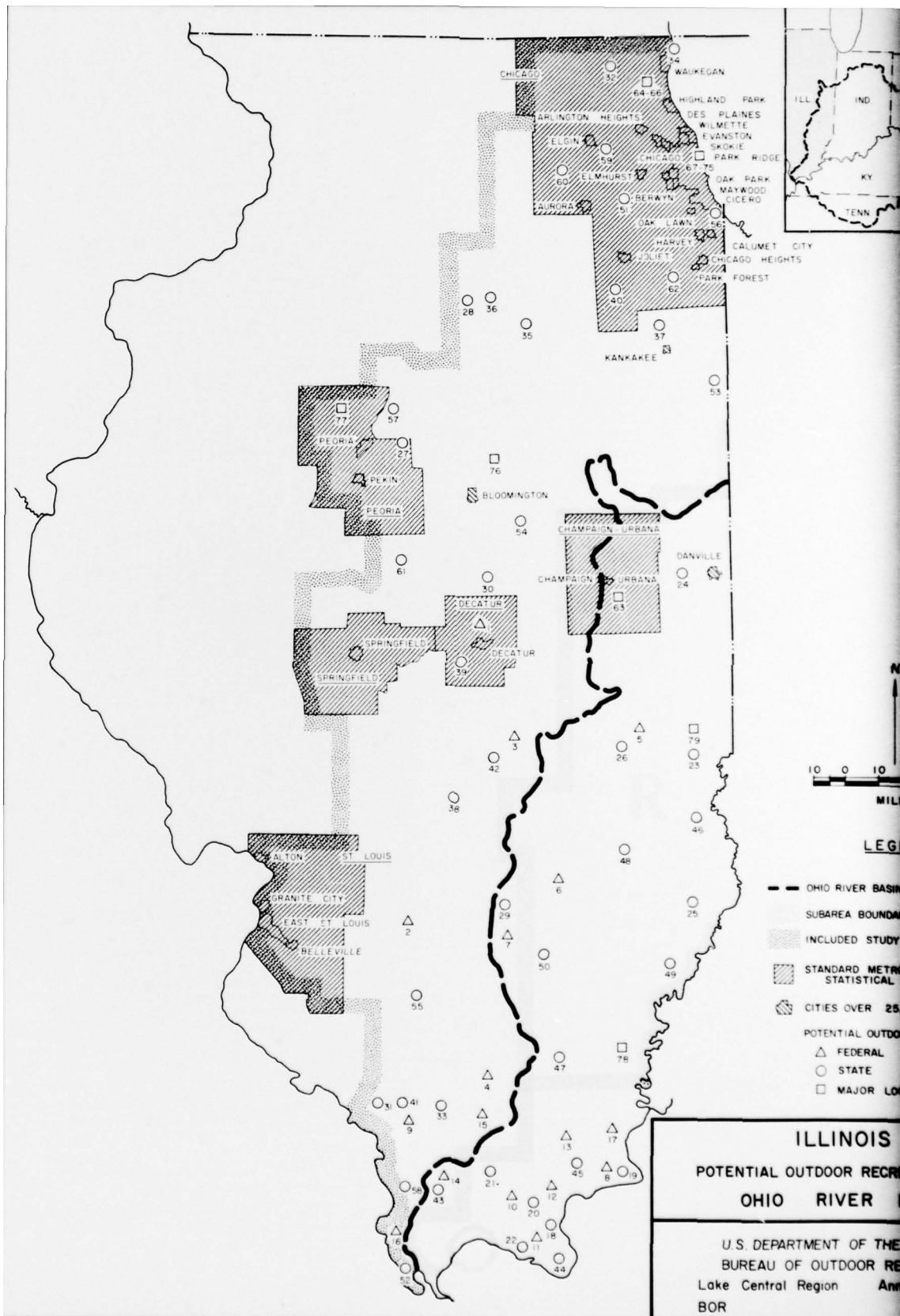


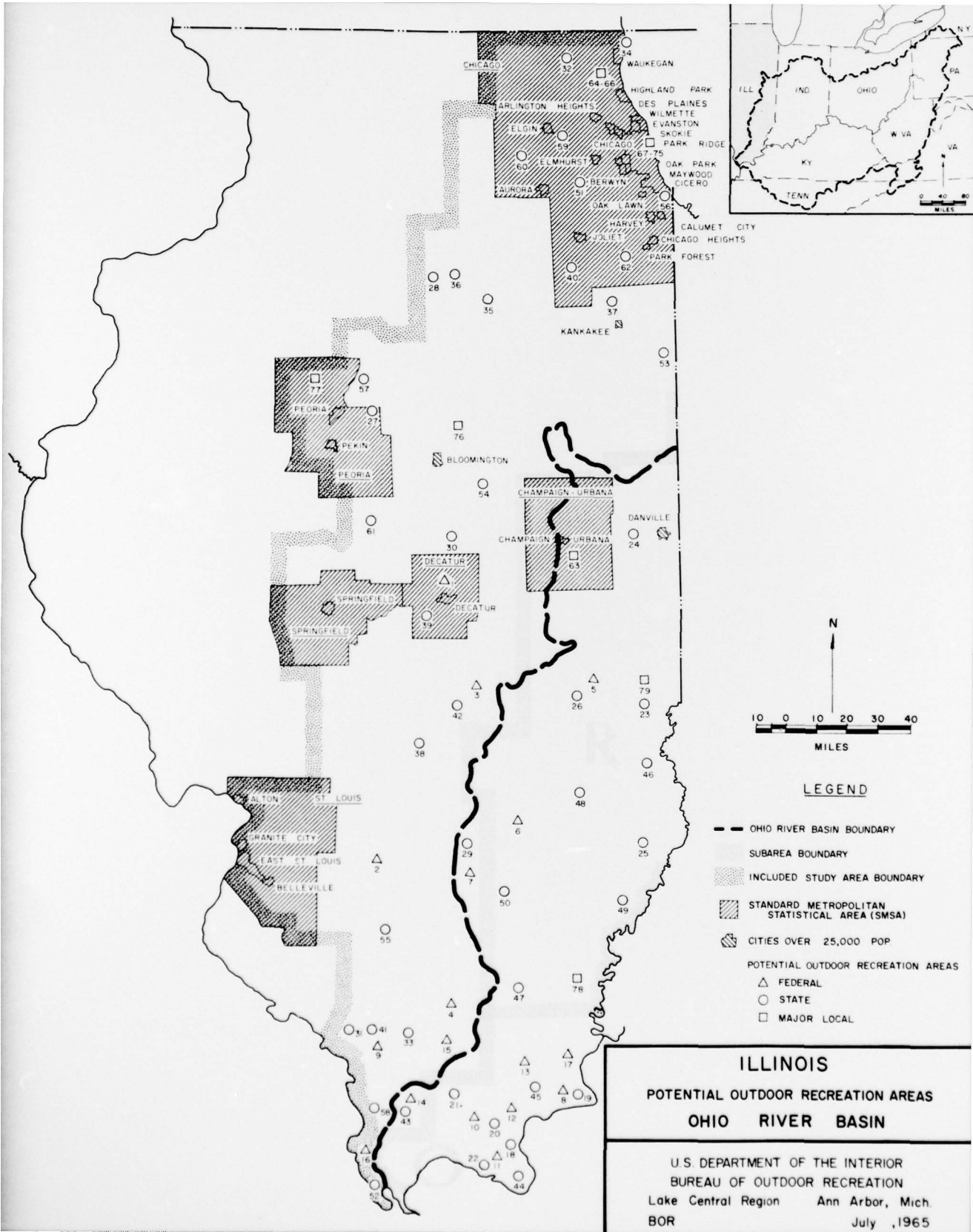
g



KENTUCKY & TENNESSEE
EXISTING OUTDOOR RECREATION AREAS
OHIO RIVER BASIN

U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF OUTDOOR RECREATION
 Lake Central Region Ann Arbor, Mich.
 BOR July, 1965





INDIANA

Corps of Engineers

1. Huntington Reservoir
2. Galumic Reservoir
3. Mississinewa Reservoir
4. Patoka Reservoir
5. Clifty Creek Reservoir
6. Big Pine Reservoir
7. Wildcat Creek Reservoir
8. Big Walnut Creek Reservoir
9. Downeyville Reservoir
10. Big Blue Reservoir
11. Brookville Reservoir
12. Norrod Reservoir
13. Matamora Reservoir

U.S. Forest Service

Hoosier National Forest:

County Units:

14. Brown
15. Crawford
16. Dubois
17. Jackson
18. Lawrence
19. Martin
20. Monroe
21. Orange
22. Perry

State Parks and Recreation Areas

23. Raccoon Lake
24. Rubicheck
25. McCormick's Creek
26. Shakerack
27. Pokagon
28. Chain O'Lakes
29. Tippecanoe River
30. Indiana Dunes
31. Spring Hill
32. Lincoln
33. Versailles
34. Playntown Peninsula
35. Fairfax Peninsula
36. Turkey Run

State Forests

37. Yellowwood
38. Clark
39. Harrison

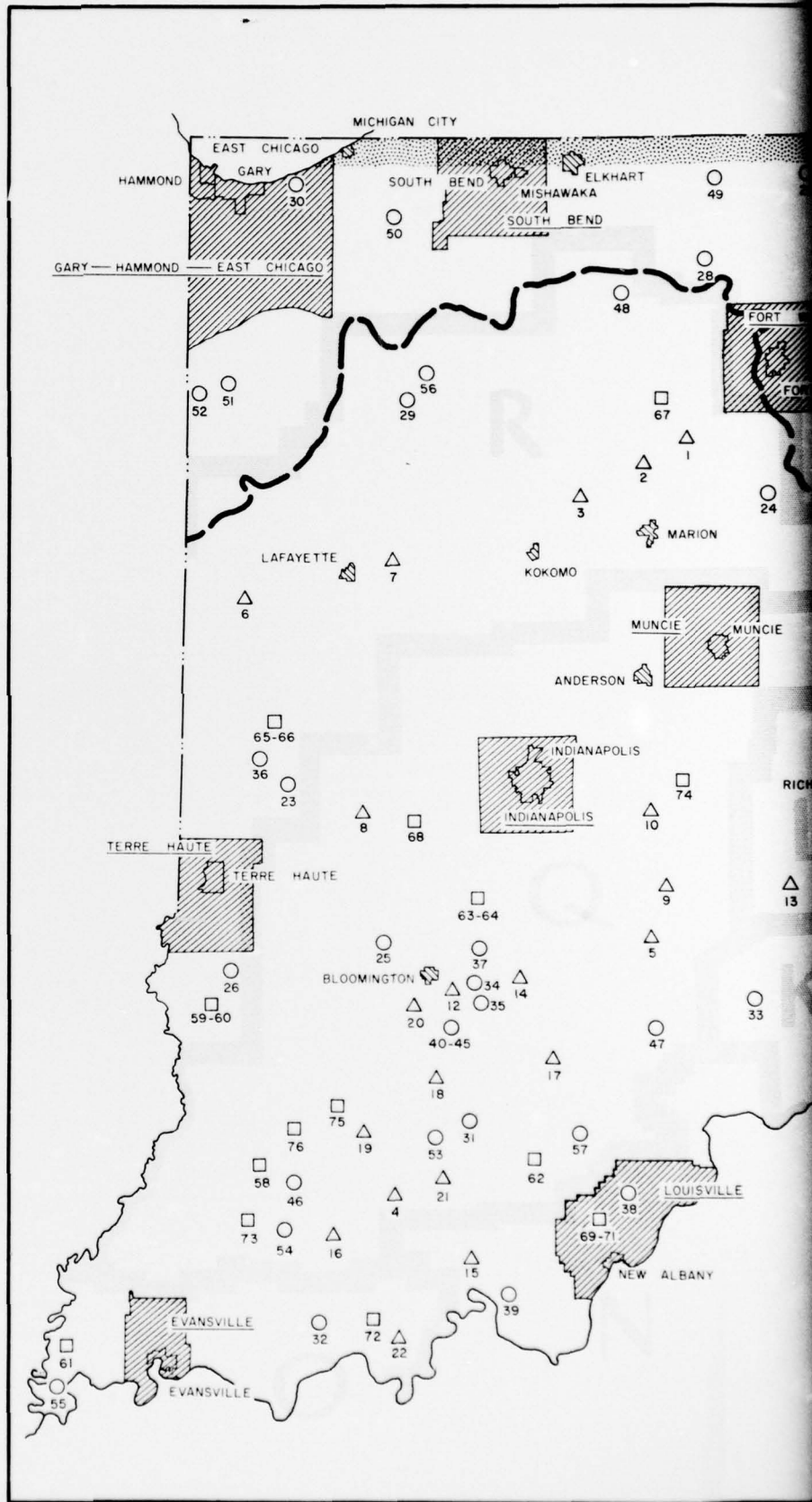
State Fish and Game Areas

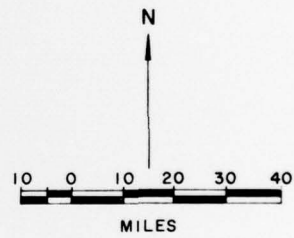
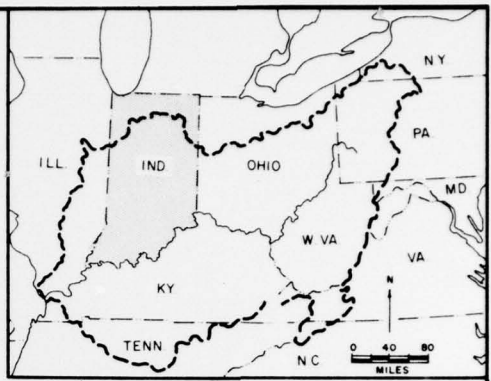
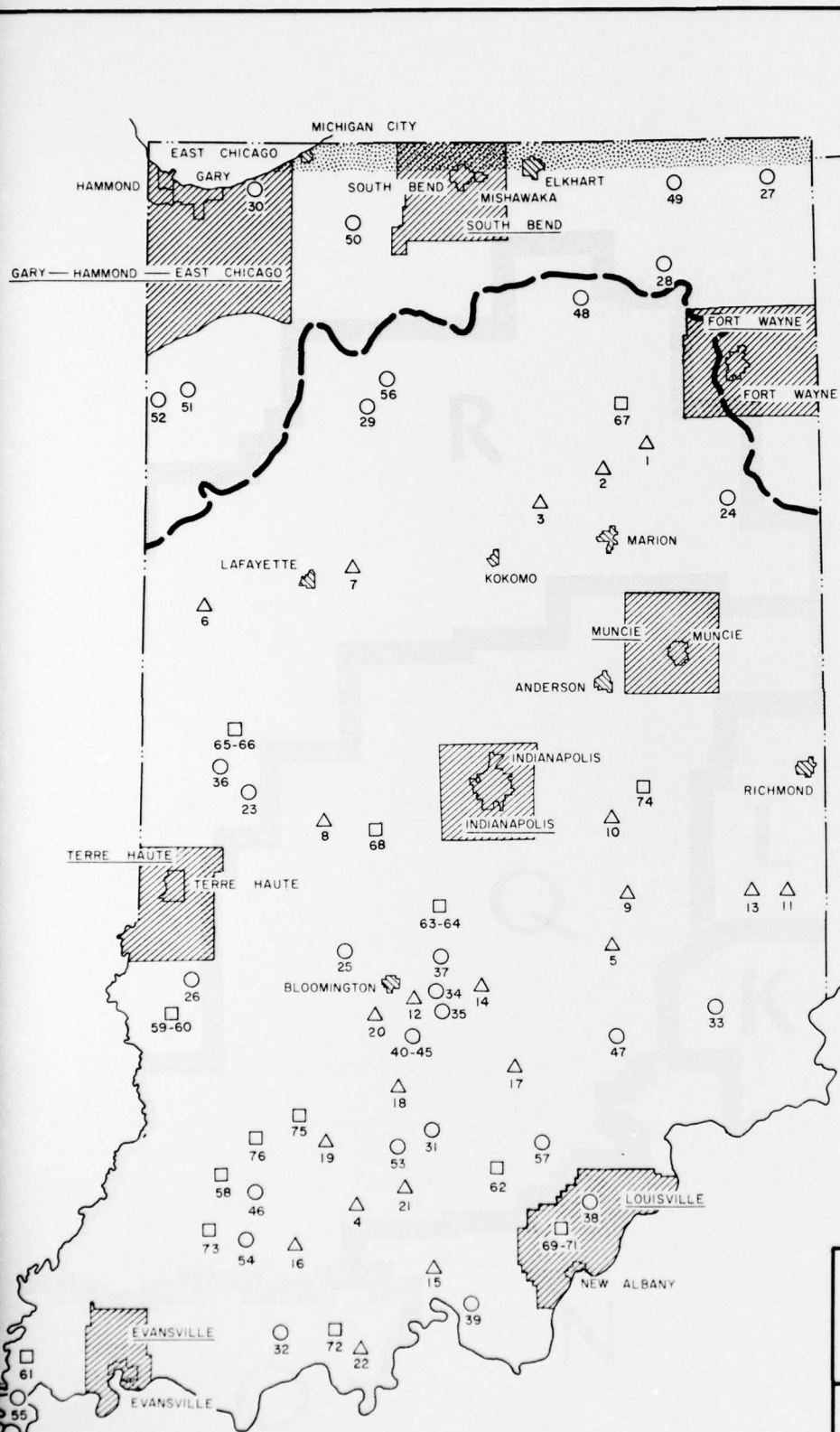
40. Mero Creek
41. Pine Grove
42. Creek Creek
43. Aztec Branch
44. Patriot Bridge
45. Allen's Creek
46. Blensie
47. Crinsley
48. Trinity
49. Nason River
50. Klemmery
51. Little
52. Willow Slough
53. Spring Valley
54. Patoka
55. Honey Lake
56. Blaines
57. Elk Creek

Major Local Areas

Watershed Conservation Districts:

58. Altona Creek
59. Apperson Creek
60. Apperson Creek
61. Big Creek
62. Colony Creek
63. Indian Creek
64. Indian Creek
65. Little Backoon
66. Little Backoon
67. Little River
68. Mill Fork
69. Nobs Fork
70. Nobs Fork
71. Nobs Fork
72. Nobs Fork at Anderson
73. Nobs Fork
74. Nobs Fork
75. Nobs Fork
76. Nobs Fork
77. Nobs Fork
78. Nobs Fork
79. Nobs Fork
80. Nobs Fork





LEGEND

- OHIO RIVER BASIN BOUNDARY
- SUBAREA BOUNDARY
- INCLUDED STUDY AREA BOUNDARY
- STANDARD METROPOLITAN STATISTICAL AREA (SMSA)
- CITIES OVER 25,000 POP.
- POTENTIAL OUTDOOR RECREATION AREAS
 - △ FEDERAL
 - STATE
 - MAJOR LOCAL

INDIANA
POTENTIAL OUTDOOR RECREATION AREAS
OHIO RIVER BASIN

U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF OUTDOOR RECREATION
 Lake Central Region Ann Arbor, Mich.
 BOR July, 1965

Ohio

Corps of Engineers

1. Dillon Reservoir
2. Big Darby Reservoir
3. Buck Creek Reservoir
4. Deer Creek Reservoir
5. Frazesburg Reservoir
6. West Branch Reservoir
7. Caesar Creek Reservoir
8. Paint Creek Reservoir
9. White Oak Reservoir
10. Upper Reservoir
11. Paulson Creek Reservoir
12. Conser Run Reservoir
13. Muggle Run Reservoir
14. Middle Branch Reservoir
15. Muddy Fork Reservoir
16. Still Fork Reservoir
17. Logan Reservoir
18. Lake Fork Reservoir
19. Lake Erie-Ohio River Canal
20. Bucyrus Reservoir
21. South Park Reservoir
22. Tinkers Creek Reservoir
23. East Fork Reservoir
24. Salt Creek Reservoir
25. Alum Creek Reservoir
26. Mill Creek Reservoir
27. Federal Creek Reservoir
28. Monday Creek Reservoir
29. Sunar Grove Reservoir
30. McLeish Reservoir

U. S. Forest Service

Wayne National Forest:

- County Units
31. Athens
 32. Gallia
 33. Hocking
 34. Lawrence
 35. Monroe
 36. Perry
 37. Scioto
 38. Washington

U. S. Fish and Wildlife Service

39. Ottawa National Wildlife Refuge

State Parks

40. Clear Fork
41. Burr Oak
42. St. Marys
43. Hueston Woods
44. Kiser Lake
45. Stonelick
46. Cowan Lake
47. Beaver Creek
48. Gullford Lake
49. Independence Dam
50. Kelly's Island
51. Buckeye
52. Harrison Lake
53. Punderson Lake
54. John Bryan
55. Salt Fork
56. Rocky Fork
57. Hocking
58. Indian Lake
59. River Styx
60. East Harbor
61. A. W. Marion
62. Pike Lake
63. Nelson-Kennedy Ledges
64. Miller Blue Hole
65. Lake Loramie
66. Portage Lake

State Forests

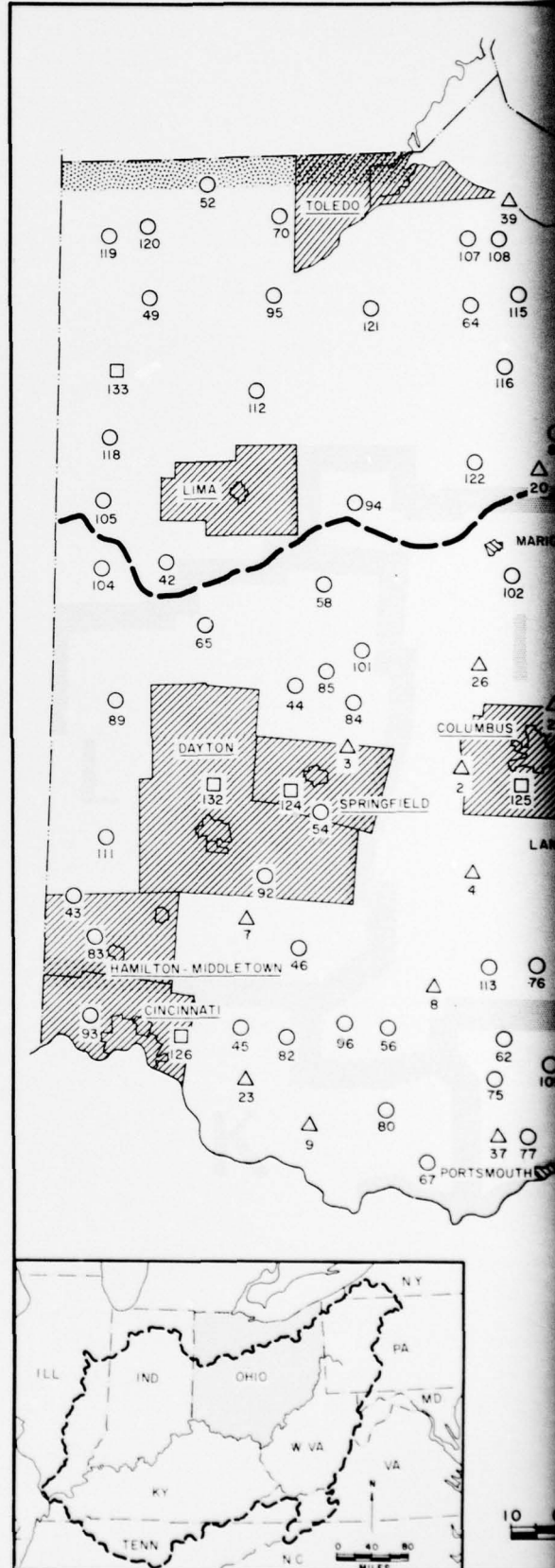
67. Brush Creek
68. African
69. Yellow Creek
70. Maumee
71. Richland Furnace
72. Shade River
73. Sunfish Creek
74. Blue Creek
75. Pike
76. Scioto
77. Shawnee
78. Raccoon
79. Zaleski

State Fish and Game Areas

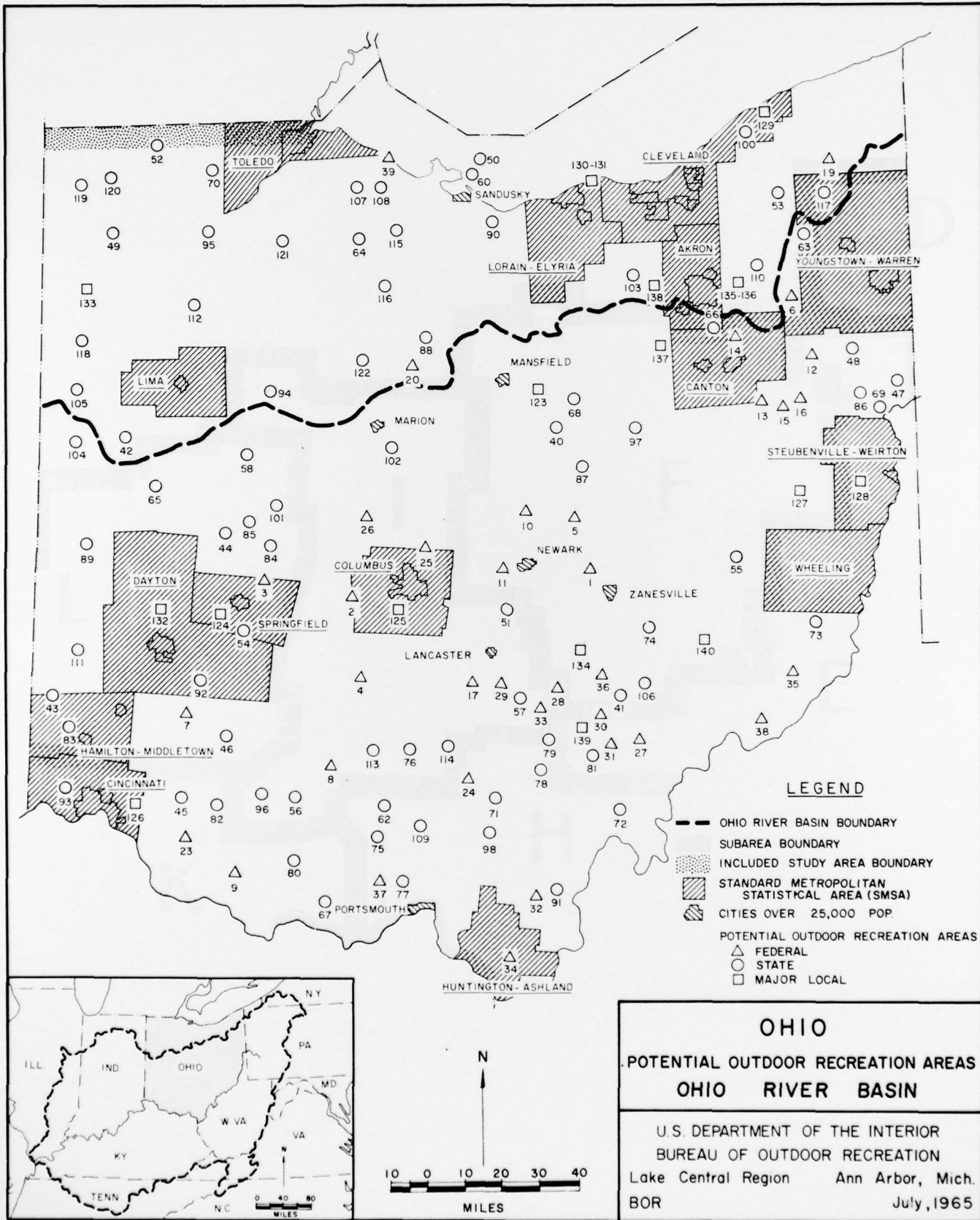
80. Tranquility Wildlife Area
81. New Area
82. Indian Creek
83. New Area
84. New Area
85. Urban Game Farm
86. Highlandtown
87. Mohican River
88. New Area
89. Darke County
90. Resthaven
91. Tycoon Lake
92. Springvalley
93. New Area
94. New Area
95. New Area
96. Fallsville
97. New Area
98. Coopers Hollow
99. Brush Creek
100. New Natural Area
101. New Area
102. Big Island
103. Spencer Lake
104. New Area
105. St. Marys
106. Wolf Creek
107. New Area
108. New Area
109. New Area
110. New Area
111. Rush Run
112. New Area
113. New Area
114. Tar Hollow
115. New Area
116. New Area
117. Grand River
118. New Area
119. New Area
120. Beaver Creek
121. New Area
122. Killdeer

Major Local Areas

123. Charles Mill Reservoir
 124. City Park - Springfield
 125. City Park - Columbus
 126. City Park - Cincinnati
 127. Harrison Co. Reclamation Area
 128. Jefferson Co. Reclamation Area
 129. Lake Co. Metropolitan Park
 130. Lorain Metropolitan Park
 131. Lorain Metropolitan Park
 132. City Park - Dayton
 133. City Park - Natural Area
 134. Perry Co. Reclamation Area
 135. City Park - Akron
 136. City Park - Akron
- Wayne County Commissioners:
137. Chippewa
- Watershed Conservation District:
138. Chippewa
 139. Margaret Creek
- Ohio Department of Natural Resources:
140. West Fork Duck Creek



DRD ENF



2

NEW YORK

Genesee State Park Commission

- 1. Silver Lake

Niagara Frontier State Park Commission

- 2. Four Mile Creek Annex
- 3. Reservoir Park
- 4. Lower Niagara State Park
- 5. Fort Niagara State Park
- 6. Hilton Tuscarora State Park
- 7. Golden Hill State Park

Allenany State Park Commission

- 8. Long Point

State Fish and Game

- 9. Silver Lake

PENNSYLVANIA

Corps of Engineers

- 10. Curwensville Reservoir
- 11. Allegheny Reservoir
- 12. Chanango Reservoir
- 13. Union City Reservoir
- 14. Muddy Creek Reservoir
- 15. Woodcock Reservoir
- 16. Roebank Creek Reservoir
- 17. Blanchard Reservoir

National Park Service

- 18. Allegheny Portage-Johnstown Flood

State Parks and Forests

- 19. Aoraine
- 20. Ohioyle
- 21. Ryerson Station
- 22. Prince Gallitzin
- 23. Yellow Creek
- 24. Canoe Creek
- 25. Detocsin
- 26. Buffalo Creek
- 27. Elk Creek
- 28. Oil Creek Gorge
- 29. Sandy Creek
- 30. Cononaugh Gorge
- 31. Sandy Creek

State Fish Commission Recreation Areas

- 32. Walnut Creek
- 33. Tamarack Lake
- 34. Haystown
- 35. Meadow Ground

Washington Co. Planning Commission

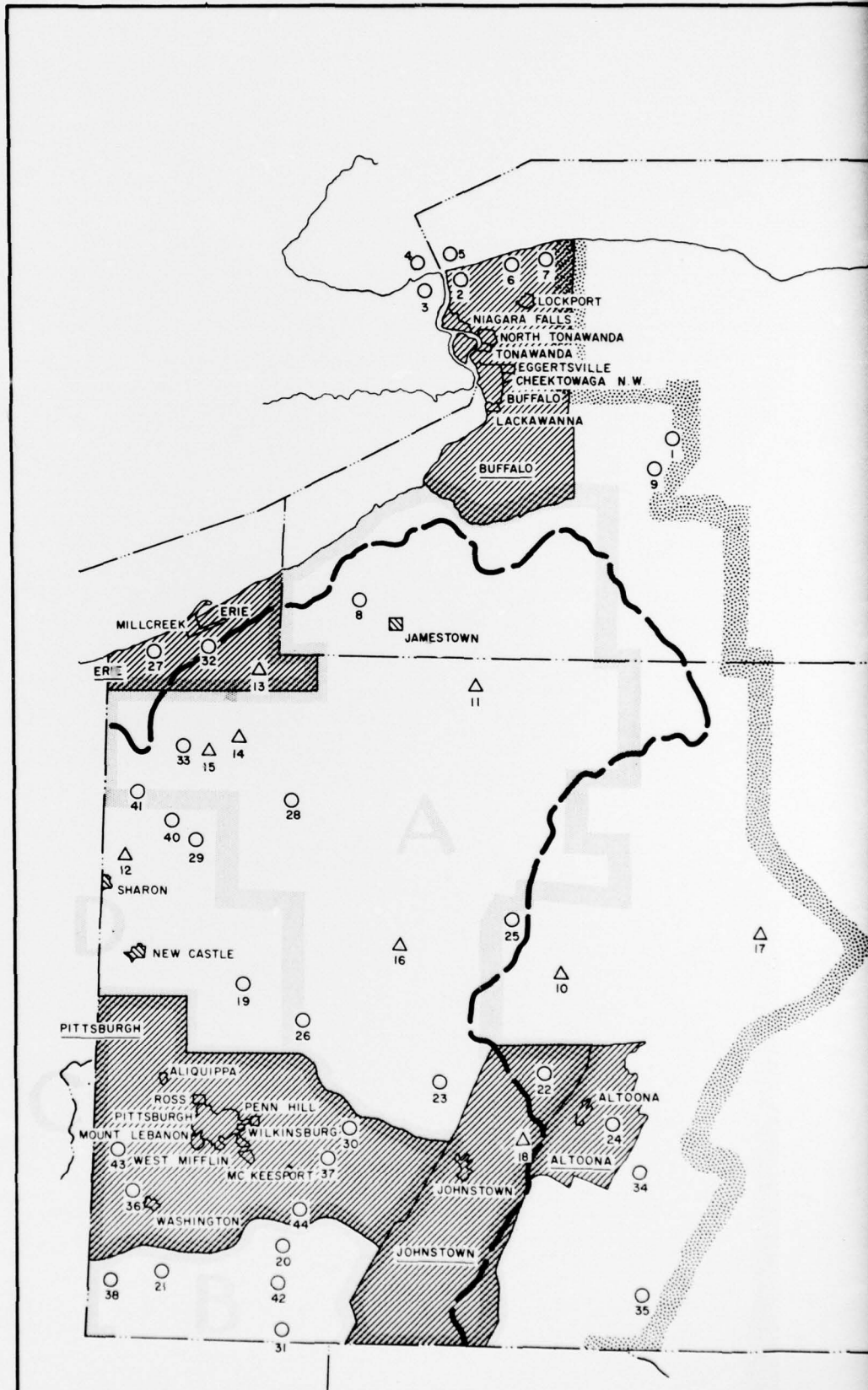
- 36. Unnamed

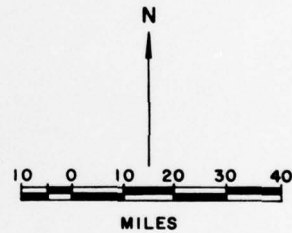
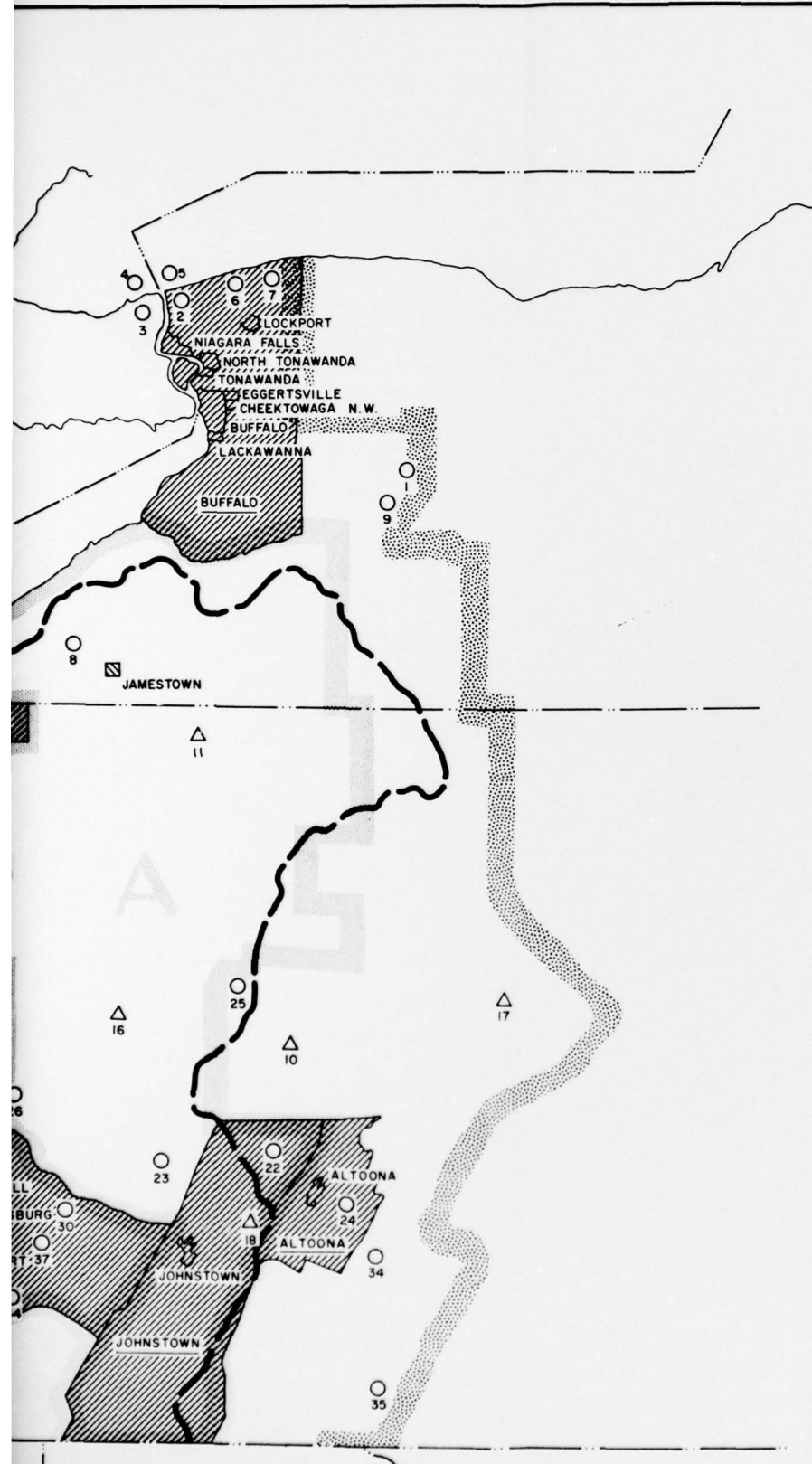
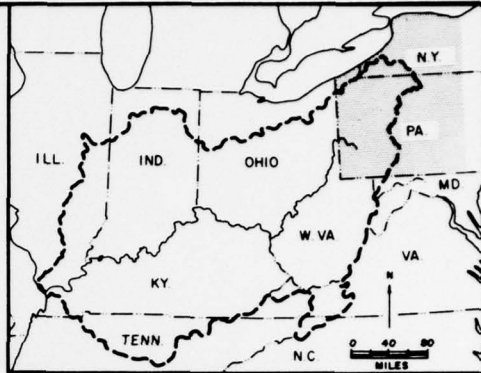
Westmoreland Co. Recreation Commission

- 37. Unnamed

State Watershed Program

- 38. Whipple Creek
- 39. Harrison Creek
- 40. Sandy Creek
- 41. Little Shenango
- 42. Dunlap Creek
- 43. Cross Creek
- 44. Jacobs Creek





LEGEND

- OHIO RIVER BASIN BOUNDARY
- ▭ SUBAREA BOUNDARY
- ▨ INCLUDED STUDY AREA BOUNDARY
- ▩ STANDARD METROPOLITAN STATISTICAL AREA (SMSA)
- ▣ CITIES OVER 25,000 POP.
- POTENTIAL OUTDOOR RECREATION AREAS
 - △ FEDERAL
 - STATE
 - MAJOR LOCAL

**PENNSYLVANIA & NEW YORK
POTENTIAL OUTDOOR RECREATION AREAS
OHIO RIVER BASIN**

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
Lake Central Region Ann Arbor, Mich.
BOR July, 1965

2

WEST VIRGINIA

Corps of Engineers

1. Howlesburg Reservoir
2. Stonewall Jackson Reservoir
3. Burnsville Reservoir
4. West Fork Reservoir
5. Leading Creek Reservoir
6. Summersville Reservoir
7. East Lynn Reservoir
8. Birch Reservoir
9. Beech Fork Reservoir
10. West Fork River Reservoir
11. Justice Reservoir

State Parks and Recreation Areas

12. Canaan Valley
13. Pricketts Creek
14. Valley Falls
15. Little Kanawha River
16. North Bend
17. Mill Creek
18. Bug Run
19. Lower Kanawha River
20. River Bend
21. Hawks Nest
22. Cedar Creek
23. Holly River
24. Babcock
25. Pipestem
26. Smoke Hole
27. Falls Mill
28. Twin Falls
29. Berwind Lake

State Forests

30. Coopers Rock
31. Kanawha
32. Calvin W. Price
33. Kumbrow
34. Seneca
35. Greenbrier
36. Panther
37. Camp Creek
38. Gatewaylingo

State Fish and Game

39. Stony River Dam
40. Pleasants Creek
41. McJannet
42. Chior Cornstalk
43. Big Ugly
44. Elk River-Pracious
45. Fork Creek
46. Back Fork of Elk
47. Bluestone
48. Laurel Creek
49. Brush Creek Falls

VIRGINIA

Corps of Engineers

50. Moores Ferry Reservoir
51. John A. Flanagan Reservoir
52. North Fork Pound River Reservoir
53. Hays Reservoir
54. Gathright & Falling Spring Reservoirs

State Game and Inland Fisheries

55. Highland Wildlife Area

Major Local Areas

56. Busted Rock
57. Blue Ridge Lake
58. Smith Mill Lake

MARYLAND

Corps of Engineers

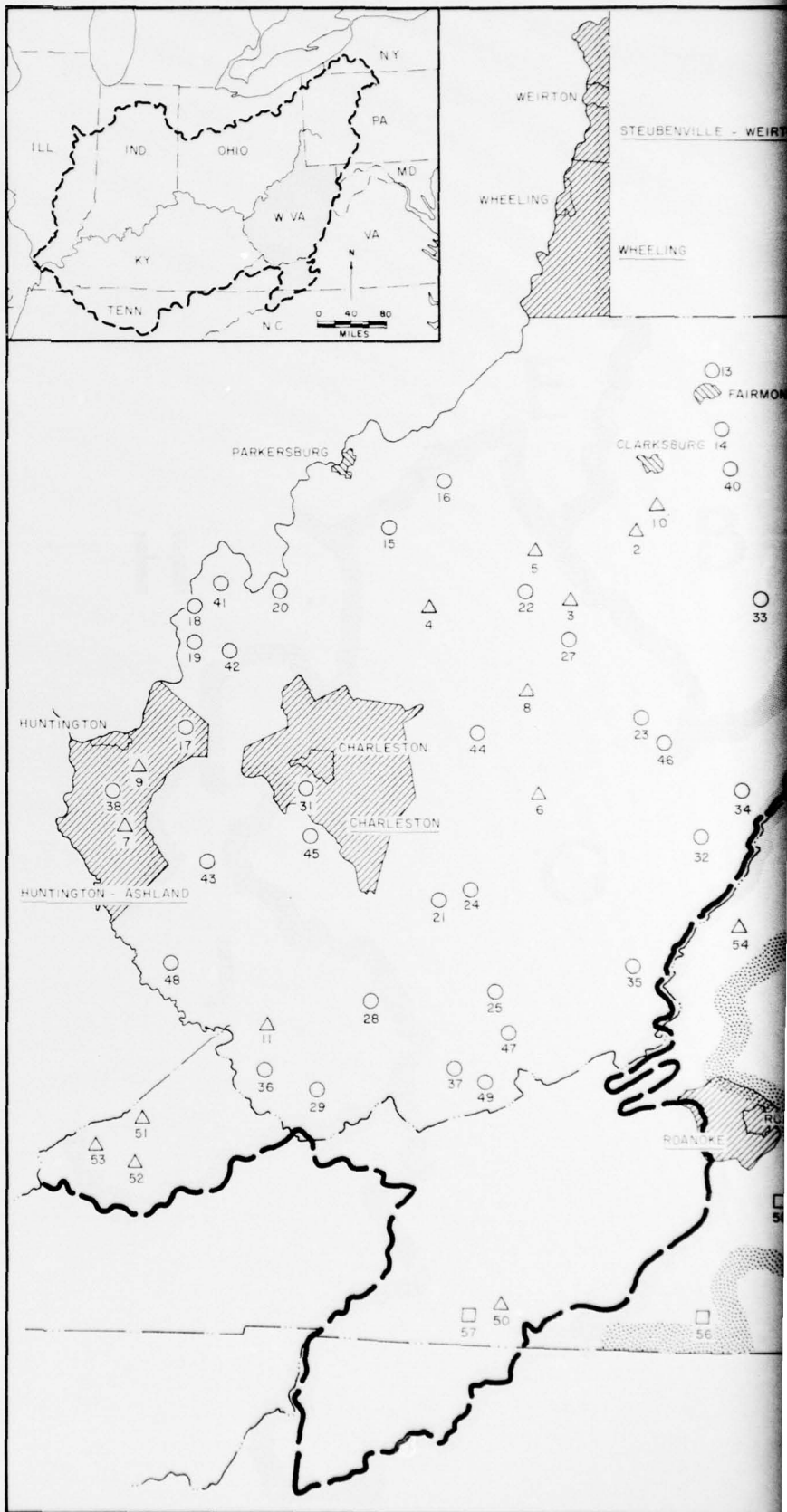
59. Cloostington Reservoir

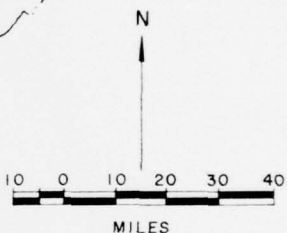
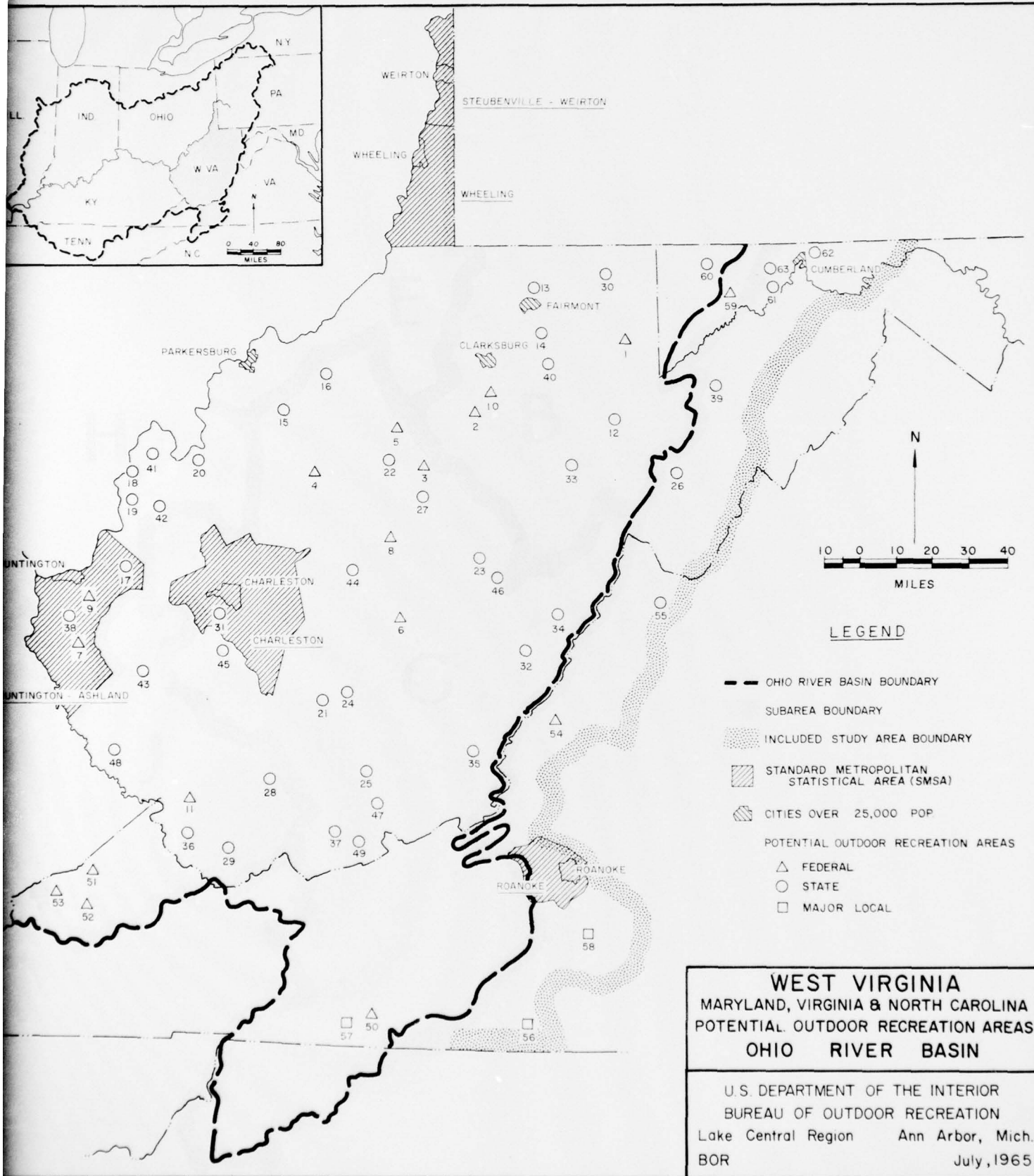
State Park and Recreation Areas

60. Saw Germany
61. Dan's Mountain
62. Rocky Gap

State Game and Inland Fisheries

63. Dan's Mountain





LEGEND

- OHIO RIVER BASIN BOUNDARY
- - - SUBAREA BOUNDARY
- INCLUDED STUDY AREA BOUNDARY
- ▨ STANDARD METROPOLITAN STATISTICAL AREA (SMSA)
- ▧ CITIES OVER 25,000 POP
- POTENTIAL OUTDOOR RECREATION AREAS
- △ FEDERAL
- STATE
- MAJOR LOCAL

WEST VIRGINIA
 MARYLAND, VIRGINIA & NORTH CAROLINA
 POTENTIAL OUTDOOR RECREATION AREAS
 OHIO RIVER BASIN

U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF OUTDOOR RECREATION
 Lake Central Region Ann Arbor, Mich.
 BOR July, 1965

2

KENTUCKY

Corps of Engineers

1. Barkley Reservoir
2. Barron Reservoir
3. Big Half Mountain Reservoir
4. Booneville Reservoir
5. Cave Run Reservoir
6. Carr Fork Reservoir
7. Colling Dam Reservoir
8. Eagle Creek Reservoir
9. Falmouth Reservoir
10. Fishtrap Reservoir
11. Grayson Reservoir
12. Green River Reservoir
13. Kinniconick Creek Reservoir
14. Laurel Reservoir
15. Nolich Reservoir
16. Paintsville Reservoir
17. Red River Reservoir
18. Rough River Reservoir
19. Taylorsville Reservoir
20. Yatesville Reservoir
21. Rockcastle Narrows Reservoir
22. Parker Branch Reservoir
23. Harting Fork Reservoir
24. Cumberland Falls Reservoir
25. Jellico Creek Reservoir

State Parks

26. Kingdom Cone
27. Rough River Dam
28. Lake Meade
29. Fort Boonesborough
30. Falmouth Lake
31. General Burnside
32. Barkley Lake
33. Elizabethtown Lake
34. Unnamed Area
35. Tin Linn Lick
36. Greenbo Lake
37. Buckhorn Lake
38. Barren River

State Fish and Wildlife Areas

39. Beech Creek Lake
40. Stone Mountain
41. Twin Eagle

Major Local Areas

42. City of Lexington
43. Watershed Conservation Districts
44. Little Kentucky River #1
45. Cypress Creek #2
46. Donaldson Creek #1
47. Grassy Creek
48. Fox Creek #4
49. City of Caneyville
50. Caney Creek #2
51. City of Elizabethtown
52. Valley Creek #4

TENNESSEE

Corps of Engineers

1. Cordell Hull Reservoir
2. J. Percy Priest Reservoir
3. Three Island Reservoir

Tennessee Valley Authority

4. Deader-Three-Lakes
5. Great Falls Lake

U. S. Fish and Wildlife Service

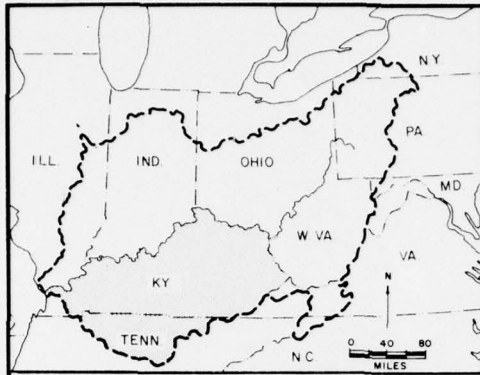
6. Cross Creeks Refuge

State Parks

7. Fall Creek Falls

Major Local Areas

8. Pine Creek

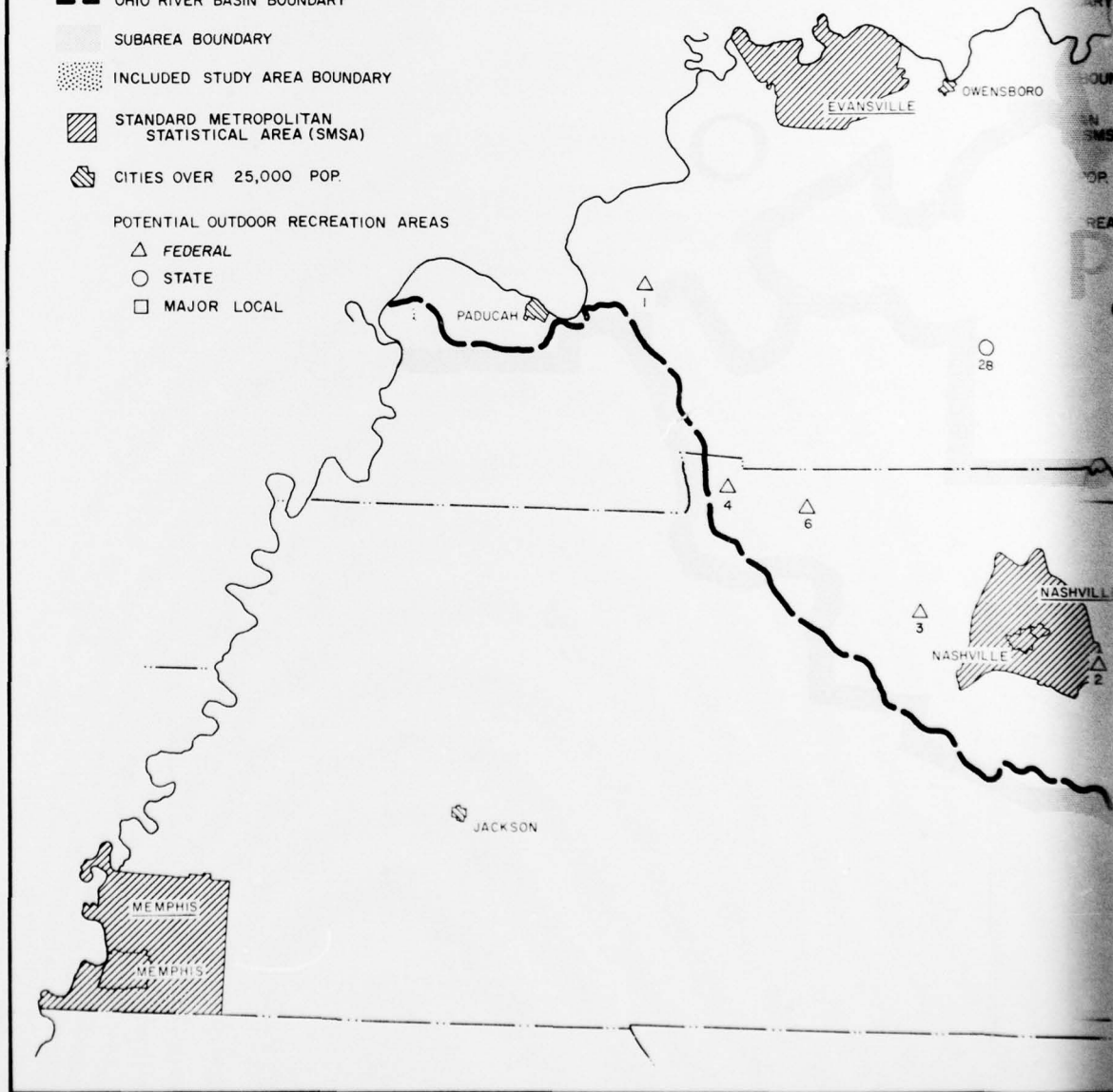


LEGEND

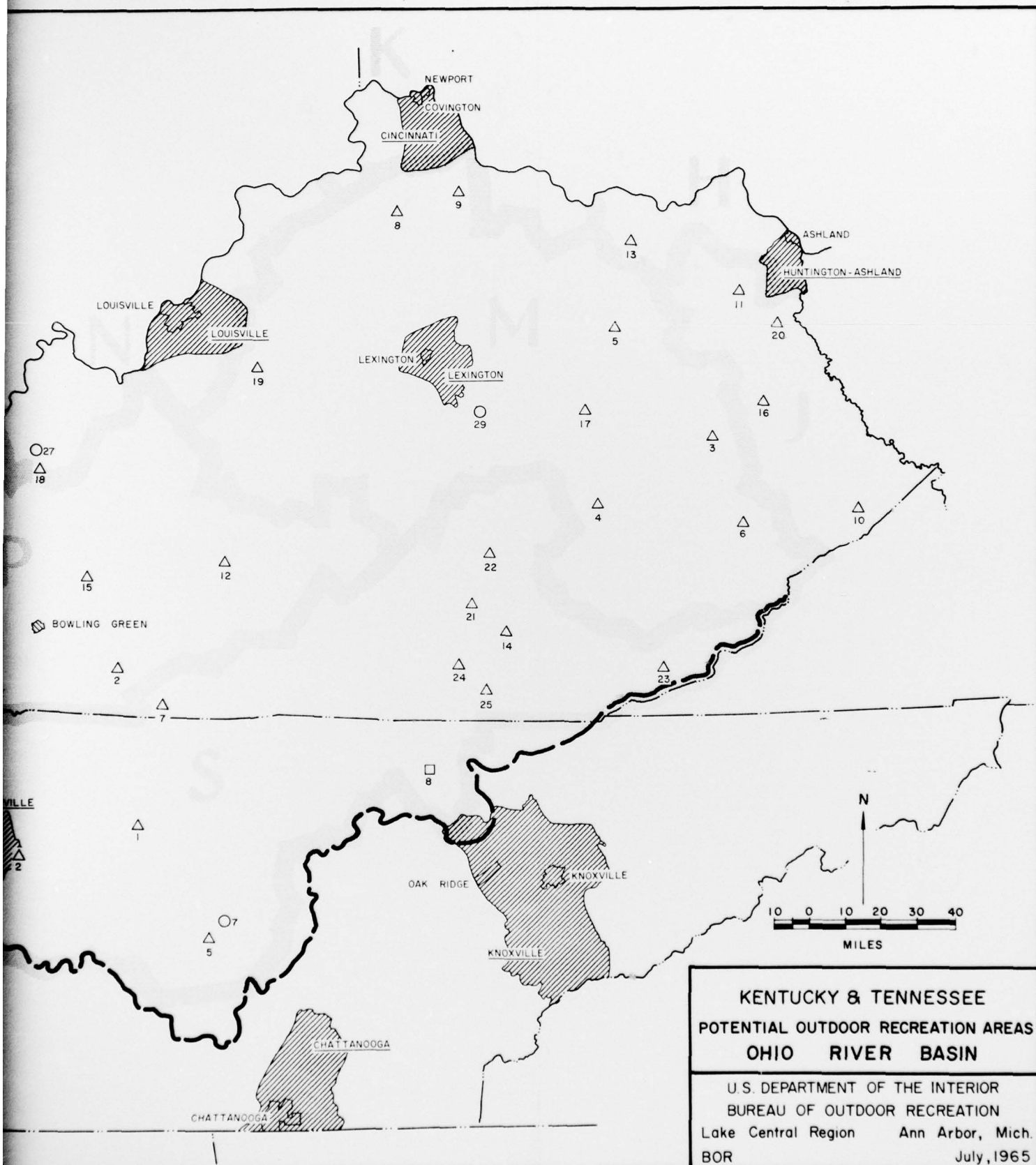
- OHIO RIVER BASIN BOUNDARY
- SUBAREA BOUNDARY
- ▨ INCLUDED STUDY AREA BOUNDARY
- ▨ STANDARD METROPOLITAN STATISTICAL AREA (SMSA)
- ▨ CITIES OVER 25,000 POP.

POTENTIAL OUTDOOR RECREATION AREAS

- △ FEDERAL
- STATE
- MAJOR LOCAL







**KENTUCKY & TENNESSEE
POTENTIAL OUTDOOR RECREATION AREAS
OHIO RIVER BASIN**

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
Lake Central Region Ann Arbor, Mich.
BOR July, 1965

2

3